

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS  
INSTITUTION OF EDUCATION  
"GOMEL STATE MEDICAL UNIVERSITY"

Department of Pathological Anatomy

**FORENSIC MEDICAL EXAMINATION OF LIVING PERSONS**

Educational-methodical recommendation  
for 5th year students  
in the discipline "Forensic medicine"

Author:  
assistant Shpak V.V.

Gomel, 2022

# **FORENSIC MEDICAL EXAMINATION OF LIVING PERSONS**

(total lesson time - 5 academic hours).

## **RELEVANCE OF THE TOPIC**

During the lesson, questions on the topic "Forensic medical examination of living persons" are studied, as well as general issues of forensic medical obstetric and gynecological examination and the peculiarities of its purpose and conduct.

Up to five hours of classes are devoted to the analysis of the topic, in addition, students prepare themselves on certain issues.

The content of the issues under study is determined by the laws and regulations in force in the Republic of Belarus of the system of forensic medical expert institutions.

In accordance with the current law (Article 228 of the Criminal Procedure Code of the Republic of Belarus), the possibility of injury by a person or the fact of receiving it, established in the course of inquiry, investigation or court, is the basis for the mandatory appointment and examination of the nature and severity of bodily injury. The determination of the nature and severity of bodily injuries during a forensic medical examination is carried out by a doctor - a state forensic medical expert.

At the same time, doctors of other specialties - traumatologists, surgeons, neuropathologists, therapists, etc.

Thus, a doctor of any specialty should have an idea of the methodological principles and features of research in determining the nature and severity of bodily injury in solving legal problems.

## **PURPOSE OF THE LESSON**

Define the concept of "bodily injury" and their classification by severity in accordance with the current legislation of the Republic of Belarus, master the principles of determining the nature and severity of bodily injury.

Indicate the main qualifying signs of bodily injury, consider the principles and methods of establishing the nature and severity of bodily injury, note the features of the examination.

Define the concept of "sexual crime", indicate the main types of sexual crimes provided for by the Criminal Code of the Republic of Belarus.

To note the peculiarities of special expert studies in cases of sexual crimes.

## **TASKS**

1. Definition of the concept of "bodily injury" and their classification in accordance with current legislation. Основные определяющие критерии тяжких телесных повреждений.
2. Characteristics of serious bodily injuries on the basis of danger to life.
3. Qualifying criteria for serious bodily injury related to outcome and consequences. Defining signs of less severe bodily injury.
4. Defining signs of light bodily injury.
5. Basic principles for establishing the nature and severity of bodily injury.

## **KEY LEARNING QUESTIONS**

1. Reasons for forensic medical examination of victims, suspects, accused and other persons, its organization and conduct.

2. Legal classification of bodily injury by severity. Criteria for severe, less severe and light bodily injury.

3. Methodology for the examination of bodily injuries, issues to be resolved.
4. Examination of the state of health (simulation, dissimulation, aggravation, disaggregation, artificial diseases, self-harm).
5. Expertise on infection with infections, predominantly sexually transmitted infections and HIV infection.
6. Forensic age determination: reasons, methods of examination.
7. Forensic examination of disputable paternity.
8. Legal and moral-ethical norms governing the relationship between the doctor and the patient. Medical secrecy. Consequences of violations by medical workers of deontological principles. Features of deontology in the activities of a state medical forensic expert.
9. Iatrogenic diseases. Definition of the concepts of crime and misconduct, careless actions, reasonable risk, extreme necessity. Professional and malfeasance of medical and pharmaceutical workers and responsibility for them under the Criminal Code of the Republic of Belarus.
10. Medical errors and accidents in medicine.
11. Legal aspects of medical intervention in human reproductive processes: artificial termination of pregnancy; artificial insemination, sterilization.
12. Surrogacy as a variant of reproductive technologies. Indications for surrogacy. Legal regulation of medical genetics. Topical ethical and legal issues of cloning.
13. Sexual crimes provided for by the Criminal Code of the Republic of Belarus. Controversial sexual conditions.
14. Expertise in cases of sodomy, issues to be resolved.
15. Expertise on the establishment of pregnancy, past childbirth and abortion.
16. Criminal abortion. Methodology for examining women with suspected criminal abortion.
17. Forensic diagnosis of death in criminal abortion. Features and significance of the inspection of the scene in connection with community-acquired abortion.
18. Methodology for conducting forensic medical examination in cases of rape, issues to be resolved.

## **MATERIALS FOR CONTROL OF THE TOPIC ASSEMBLY**

### **Terminology**

**Signs of serious injury** – danger to life; loss of vision, speech, hearing, any organ or loss of its functions by the organ; abortion; mental disorder (disease); a health disorder associated with a permanent loss of general working capacity by at least one third; a health disorder associated with an injury to the bones of the skeleton, for a period exceeding four months; permanent disfigurement of the face or neck.

**Signs of less serious bodily injury** - long-term health disorder for a period not exceeding four months; significant persistent loss of general working capacity by less than one third.

**Signs of minor bodily injury** - short-term health disorder; insignificant persistent loss of general working capacity.

**Signs of bodily injury that did not entail a short-term health disorder or minor permanent disability** - the presence of a minor short-term health effect.

**Injuries dangerous to human life** - injuries that, by their nature, directly pose a threat to life, or damage that caused a life-threatening condition.

**Loss of vision** is complete permanent blindness in both eyes or such an irreversible condition when, as a result of an injury, an individual has a deterioration in vision, which corresponds to a visual acuity of 0.04 and below without taking into account the correction.

**Loss of speech** is the irreversible loss of the ability to express thoughts in articulate sounds that are understandable to others.

**Hearing loss** is complete persistent deafness in both ears or such an irreversible condition when an individual does not hear spoken speech at a distance of 3-5 cm from the auricle without taking into account the correction.

**Termination of pregnancy** - termination of the course of pregnancy caused by bodily injury, with the development of miscarriage, fetal death, premature birth (22-36 weeks of gestation), or disruption of the course of pregnancy, which necessitated medical intervention to terminate it.

**Permanent disfigurement of the face or neck** - damage that cannot be repaired without surgical intervention (for example, cosmetic surgery), including a violation of facial symmetry, facial expressions, scars, ulceration of the face or neck, separation of the nose, lips, ear and other defects of the face or neck caused by mechanical impact, exposure to flame, corrosive substances, and others.

### **Forensic medical examination of living persons**

#### ***Forensic medical examination to determine the severity of bodily injury***

When determining the severity of bodily injuries in an individual, a forensic expert establishes that he has bodily injuries, determines their nature (abrasion, bruising, wound, fracture, etc.), quantity, localization, mechanism of formation, severity, the presence of a causal relationship between them and the resulting consequences, other characteristics, taking into account the issues posed in the resolution (determination) on the appointment of an examination.

When bodily injuries are found on a corpse, a forensic expert determines their nature, quantity, localization, mechanism of formation, the presence or absence of a causal relationship between injuries and the onset of death, except for those cases when the forensic expert finds that the injuries are the direct cause of death, and also indicates, signs of what degree of severity the injuries have.

The severity of bodily injury during a forensic medical examination is established taking into account the signs provided for in the Criminal Code of the Republic of Belarus and the Code of the Republic of Belarus on Administrative Offenses, and is defined as:

*serious bodily injury - with the following symptoms:*

*danger to life;*

*loss of vision, speech, hearing, any organ or loss of its functions by the organ;*

*abortion;*

*mental disorder (disease);*

*a health disorder associated with a permanent loss of general working capacity by at least one third;*

*a health disorder associated with an injury to the bones of the skeleton for a period exceeding four months;*

*permanent disfigurement of the face or neck;*

*less serious bodily injury - with the following symptoms:*

*a long-term health disorder for a period not exceeding four months;*  
*significant persistent loss of general working capacity by less than one third;*  
*slight bodily injury - with the following symptoms:*  
*short-term health disorder;*  
*insignificant persistent loss of general working capacity;*  
*bodily injury that did not entail a short-term health disorder or a slight persistent disability, in the presence of an insignificant transient health effect.*

To determine the severity of bodily injury, it is sufficient to have one of these signs. In the presence of several signs, the severity of injuries is determined by the sign that corresponds to the greater degree of severity.

The severity of the injury is determined by the forensic expert based on medical criteria for signs of the severity of the injury.

When conducting a forensic medical examination to determine the severity of bodily injury, a forensic expert examines the submitted medical and other documents, ascertains from an individual the circumstances in which the bodily injury was caused, complaints about the state of health, other information necessary to determine the severity of bodily injury, is carried out examination of an individual.

Examination of an individual is carried out in an expert institution, except for cases when an individual cannot arrive (be delivered) to an expert institution (being in stationary conditions in a healthcare organization, in places of detention, etc.). In these cases, the examination of an individual is carried out by a forensic expert at the location of this person.

Before starting the examination of an individual, a forensic expert verifies his identity.

An examination of an individual who has independently arrived at an expert institution, and it is not possible to verify his identity, is not carried out.

In the absence of identity documents of an individual who was delivered to an expert institution for examination, or an individual who, in accordance with paragraph 9 of this Instruction, cannot arrive (be delivered) to an expert institution, the identity data of such a person is recorded from the words of a representative of the body (a person) who brought an individual for examination, or a representative of the organization in which the individual is located.

During the examination of an individual by a forensic expert, the nature of the bodily injury, the number, location and other necessary signs, as well as information from medical and other documents concerning the question posed to the forensic expert, are recorded.

If the examination by a forensic expert reveals a different origin of bodily injuries in an individual in terms of the mechanism of formation, then the mechanism of formation of each of them is indicated.

In the case when bodily injuries have a different age of formation, the age of occurrence and the severity of each of them are indicated.

When establishing several signs that characterize bodily injury as serious, all of them are indicated in the expert's opinion.

If the examination of an individual is not possible, a forensic medical examination to determine the severity of bodily injuries can be carried out according to medical documents and other documents provided in the prescribed manner by the body (person) who appointed the examination, and other documents containing comprehensive data on the nature of injuries and

their clinical course, as well as other information required by a forensic expert for its implementation.

In the course of a forensic medical examination to determine the severity of bodily injury, the nature and duration of the disease or dysfunction of tissues, organs and (or) body systems associated with bodily injury is assessed by a forensic expert based on objective medical data established during the examination. In this case, the duration of treatment may not coincide with the duration of the disease or impairment of functions associated with bodily injury.

If the duration of the illness indicated in the medical documents does not correspond to the nature of the bodily injury caused and is not confirmed by objective data, or the duration of the health disorder caused by the identified bodily injury does not coincide with the duration of the health disorder indicated in the medical documents, the forensic expert notes this circumstance in his conclusions. and the severity of the injury is established based on objective data.

Exacerbation of previous diseases after causing bodily injury, as well as other consequences of bodily injury arising from random circumstances, individual characteristics of the body, deficiencies in the provision of medical care, are not grounds for changing the severity of bodily injury. In such cases, the expert's opinion indicates the nature of the deterioration or complication that has occurred and in what causal relationship it is with this bodily injury.

If an individual has had any previous injury or disease with a completely or partially lost function of tissue, organ and (or) body systems, then only the bodily injury caused by this injury and causally associated with it is taken into account. The severity of bodily injury to a painfully altered internal organ is established without taking into account the existing pathology.

If a forensic expert establishes that bodily injury is dangerous to the life of the investigated individual, or the consequences and outcome of bodily injury that are not dangerous to life are beyond doubt, the forensic expert can determine the severity of the bodily injury without waiting for its outcome.

When deciding the issue of permanent disability of an individual, the percentage of permanent loss of general disability is established. At the same time, the question of the degree of loss of professional ability to work is not resolved.

The question of the percentage of permanent loss of general working capacity is decided after four months from the date of injury, except for cases when its consequences and outcome are not in doubt.

The percentage of permanent loss of general working ability is established in accordance with a special table of percent of permanent loss of general working ability as a result of traumatic effects of physical, chemical, biological, mental and other environmental factors.

The severity of injury is not determined if:

- in the process of examining an individual, studying medical and other submitted documents, it is not actually possible to establish the presence of bodily injuries;
- at the time of examination of an individual, the outcome of bodily injuries that are not dangerous to human life is not clear;
- examination of an individual, in respect of whom the expert examination was assigned, is impossible, and the submitted medical and other documents do not contain comprehensive

data on the nature of the injuries and their clinical course, as well as other information necessary for the forensic expert to conduct the examination, which deprives the forensic expert of the opportunity to correctly assess the nature of the injury, its clinical course and outcome.

A forensic expert, in a conclusion or a report on the impossibility of giving an opinion, sets out the reasons that do not allow determining the severity of the injury, and indicates what information is needed to resolve this issue (medical documents, the results of additional research, or other), and also indicates the period of time after which an individual can be re-sent for a forensic medical examination to determine the severity of bodily injuries in the case when at the time of his examination the outcome of bodily injuries that are not dangerous to human life is not clear.

The expert's opinion (a message about the impossibility of giving an opinion) is drawn up in writing in accordance with the requirements of procedural legislation and transmitted to the body (person) that appointed the examination. In the expert institution, the issuance of copies of the expert's opinion (a message about the impossibility of giving an opinion) is carried out with the written permission of the body (person) that appointed the examination, or the body (person), which, in the manner prescribed by law, has a material or case containing the expert's opinion, with the exception of issuance of a copy of the expert's conclusions (messages about the impossibility of giving an opinion) at the request of the authorized state bodies.

*Medical criteria for signs of the severity of injuries.*

*The medical criteria for signs for grievous bodily harm are:*

1. *For bodily injuries dangerous to human life - injuries that, by their nature, directly pose a threat to life, or damage that caused a life-threatening condition. The prevention of death due to the provision of medical care is not taken into account when assessing the risk to life of such injuries.*

2. Bodily injuries dangerous to human life include:

- a head wound that penetrates into the cranial cavity, including without damage to the brain;

- fracture of the vault and (or) the base of the skull, with the exception of an isolated crack in their outer or inner bone plate;

- cerebral contusion of moderate degree, or traumatic epidural or subdural hemorrhage, or subdural hygroma, or subarachnoid hemorrhage, or intracerebral hemorrhage, or hemorrhage in the cerebral ventricles in the presence of a life-threatening condition;

- severe brain contusion, diffuse axonal brain damage;

- a neck wound penetrating into the cranial cavity, or into the pleural cavity, or into the lumen of the pharynx, or larynx, or trachea, or esophagus;

- fracture of the hyoid bone or cartilage of the larynx: thyroid, or cricoid, or arytenoid, or epiglottis, or horn-shaped, or tracheal cartilage in the presence of a life-threatening condition;

- comminuted fracture of the body (with damage to its dorsal parts) of the cervical vertebra, or bilateral fracture of the cervical vertebra arch, or fracture of the second cervical vertebra tooth, unilateral fracture of the cervical vertebra arch with dysfunction of the spinal cord (dysfunction of the spinal cord means dysfunction of the pelvic organs or disorders of motor function (paralysis (plegia), paresis), which may or may not be transient), unilateral fractures of the arches of two or more cervical vertebrae, including those without dysfunction of the spinal cord;

- unilateral dislocation of one cervical vertebra with dysfunction of the spinal cord, bilateral dislocation of the cervical vertebra or unilateral dislocation of two or more cervical vertebrae, including without dysfunction of the spinal cord, traumatic rupture of the intervertebral disc at the level of the cervical spine with dysfunction of the spinal cord;
- contusion of the cervical spinal cord with impaired function;
- a chest wound that penetrates into the pleural cavity, or into the pericardial cavity, or into the abdominal cavity, including without damage to internal organs;
- closed damage (crush, separation, rupture, i.e., complete violation of the integrity of the wall of a hollow organ or damage to the tissue of the parenchymal organ with rupture of its capsule) of the neck and chest cavity organs: heart, or lung, or bronchi, or trachea, or esophagus, or thymus, or diaphragm, or lymphatic thoracic duct;
- multiple bilateral or unilateral fractures of the ribs with the formation of a movable section of the chest wall of the "rib valve" type;
- fracture of the body or arch of the thoracic vertebra with dysfunction of the spinal cord;
- dislocation of the thoracic vertebra or traumatic rupture of the intervertebral disc in the thoracic region with dysfunction of the spinal cord;
- contusion of the thoracic spinal cord with dysfunction;
- an abdominal wound that penetrates into the abdominal or chest cavity, including without damaging the internal organs;
- closed damage (crush, tear, rupture) of the abdominal organs: the spleen, or liver, and / or gallbladder, or stomach, or small intestine, or large intestine (except for the lower third of the rectum), or greater omentum, or mesentery of the large and (or) small intestine, retroperitoneal organs (pancreas, or kidney, or adrenal gland, or ureter);
- a wound of the abdomen, or back, or pelvis, penetrating into the retroperitoneal space, with damage to the organs of the retroperitoneal space: the pancreas, or the kidney, or the adrenal gland, or the ureter, or the descending or horizontal part of the duodenum, or the ascending or descending part of the colon;
- fracture of the body or arch of the lumbar vertebra with dysfunction of the spinal cord and (or) the roots of the cauda equina;
- dislocation of the lumbar vertebra or traumatic rupture of the intervertebral disc in the lumbar, lumbosacral spine with dysfunction of the spinal cord and (or) the roots of the cauda equina;
- contusion of the lumbar spinal cord with impairment of its functions and (or) the roots of the "cauda equina";
- damage (crush, avulsion, rupture) of the testicle or pelvic organs: open and (or) closed damage to the bladder, or ovary, or uterine (fallopian) tube, or uterus, or prostate gland;
- fractures of the diaphysis of long tubular bones (humerus, femur, tibia), with the exception of subperiosteal fractures in persons under the age of 18;
- rotationally unstable or vertically unstable fractures of the pelvic bones: bilateral fractures of the anterior pelvic semicircle with discontinuity; unilateral fractures of the pelvic bones in the posterior part with discontinuity of the pelvic ring;
- isolated fractures of the sacrum with dysfunction of the cauda equina roots;
- a wound penetrating into the vertebral canal of the cervical, or thoracic, or lumbar, or sacral spine, including without damage to the spinal cord and cauda equina;



- closed spinal cord injury: complete or incomplete break of the spinal cord, crushing of the spinal cord;
- hemorrhage inside the canal of the spinal cord with a violation of its functions;
- damage (rupture, separation, dissection, traumatic aneurysm) of large blood vessels: the aorta, or the carotid artery (common, external, internal), or the vertebral part of the vertebral artery, or subclavian, or axillary, or brachial, or iliac (common, external, internal), or femoral, or popliteal artery and (or) accompanying great veins;
- blunt trauma of reflexogenic zones: the region of the larynx, carotid sinuses, solar plexus, external genital organs in the presence of a life-threatening condition;
- thermal, or chemical, or electrical, or radiation burns of the III-IV degree, exceeding 10% of the body surface, III degree burns, exceeding 15% of the body surface, II degree burns, exceeding 20% of the body surface;
- frostbite of III-IV degree with a lesion area exceeding 10% of the body surface; frostbite of the III degree with a lesion area exceeding 15% of the body surface; frostbite II degree with a lesion area exceeding 20% of the body surface;
- radiation injuries, manifested by severe and extremely severe acute radiation sickness;
- acute poisoning with chemical and biological substances in the presence of a life-threatening condition;
- various types of mechanical asphyxia, the consequences of general exposure to high or low temperatures (heatstroke, sunstroke, general overheating, hypothermia), the consequences of exposure to high or low atmospheric pressure (barotrauma, decompression sickness), the consequences of exposure to technical or atmospheric electricity (electrical injury), the consequences of other forms of adverse effects (dehydration, exhaustion, overstrain of the body) in the presence of a life-threatening condition;
- damage causing a life-threatening condition.

A life-threatening condition is a disorder of the vital functions of the human body, which cannot be compensated by the body on its own and without medical assistance usually ends in death. The occurrence of a life-threatening condition must be directly related to the infliction of bodily harm.

Life-threatening conditions include:

- shock of severe (III-IV) degree;
- coma of various etiology;
- acute or profuse (massive) blood loss (hypotension - systolic blood pressure below 100 mm Hg, tachycardia - heart rate more than 100 per minute, tachypnea - respiratory rate more than 25 per minute, hemoglobin level below 80 g / l, hematocrit is below 30%, circulating blood volume deficit is below 35%);
- acute heart failure (pulmonary edema, cardiogenic shock), or vascular insufficiency (necrosis of the internal organ, gangrene of the limb), or cerebral circulation disorder with severe cerebral symptoms, depression of consciousness, signs of cerebral edema with dislocation manifestations, vegetative trophic disorders, gross focal symptoms;
- acute kidney damage (acute renal failure) - oligoanuria (less than 0.3 ml / kg per hour) for more than 24 hours or anuria for more than 12 hours, an increase in blood creatinine by 3 times or more (354  $\mu$ mol / l and more with a daily increase of 44  $\mu$ mol / l for 1-7 days);
- acute hepatic failure (hepatic encephalopathy or hepatic coma against the background of severe liver dysfunctions);

- acute adrenal insufficiency with pronounced cardiovascular and neuropsychiatric disorders (vascular collapse with a sharp drop in blood pressure, coma);
- acute pancreatic necrosis;
- acute respiratory failure (coma, tachypnea (respiratory rate 40 or more) or bradypnea (respiratory rate 8-10), decrease in pO<sub>2</sub> to 50 mm Hg, increase in pCO<sub>2</sub> to 80-90 mm Hg and more) ;
- purulent-septic condition;
- a disorder of the regional and (or) organ circulation, leading to an infarction of an internal organ or gangrene of a limb;
- embolism of various etiologies of the vessels of the brain or lungs with pronounced symptoms of hypoxia, gross violations of the central nervous system;
- syndrome of disseminated intravascular coagulation (hypocoagulation stage).

In the event that a life-threatening condition develops as a result of multiple bodily injuries and it is impossible to single out from their number any separate injury as its cause, a separate assessment according to the severity of each of them is not given, while all the indicated bodily injuries are defined as serious;

2. For vision loss - complete persistent blindness in both eyes or such an irreversible condition when, as a result of an injury, an individual has a deterioration in vision, which corresponds to a visual acuity of 0.04 and below without taking into account the correction.

Loss of vision in one eye is assessed in accordance with a special table of the percentage of permanent loss of general working capacity.

The post-traumatic removal of one eyeball, which had vision before the injury, is also assessed in accordance with a special table of the percentage of permanent total disability.

The severity of injury resulting from the loss of a blind eye is determined by the duration of the disorder;

3. For loss of speech - irreversible loss of the ability to express thoughts in articulate sounds, understandable to others;

4. For hearing loss - complete persistent deafness in both ears or such an irreversible condition when an individual does not hear spoken speech at a distance of 3-5 cm from the auricle without taking into account the correction.

Hearing loss in one ear is assessed in accordance with a special table of the percentage of permanent loss of general working capacity;

5. For the loss of an organ or the loss of its functions by an organ:

- loss of an arm or leg, that is, their separation from the body (not lower than the elbow and knee joints), or their persistent loss of functions (paralysis or other condition that excludes their functions);

- loss of reproductive ability, expressed in men in the ability to copulate or fertilize, in women - in the ability to copulate, or conception, or bearing, or childbirth;

6. For a health disorder associated with a persistent loss of general ability to work by at least one third - a persistent loss (over 33%) of the functions of tissues, organs and (or) body systems, leading to disorders, including limitations of vital activity (limitation of ability to self-service, regardless of the qualifications and profession (specialty) of an individual, loss of the ability of an individual to act aimed at obtaining a socially significant result in the form of a certain product, product or service);

7. For termination of pregnancy - termination of the course of pregnancy caused by bodily injury, with the development of miscarriage, fetal death, premature birth (22-36 weeks of gestation) or disruption of the course of pregnancy, necessitating medical intervention to terminate it.

If external reasons have necessitated termination of pregnancy by medical intervention (curettage of the uterus, cesarean section, etc.), then these injuries and the resulting consequences are equated to termination of pregnancy and are assessed as grievous bodily harm;

8. For permanent disfigurement of the face or neck - damage that cannot be repaired without surgery (for example, cosmetic surgery), including violation of facial symmetry, facial expressions, scars, ulceration of the face or neck, separation of the nose, lips, ear and other defects of the face or neck, caused by mechanical impact, exposure to flame, corrosive substances, and others.

If a bodily injury on the face or neck is recognized by a forensic expert as indelible, the expert's opinion, along with the severity of the injury established on the basis of general medical criteria determined by this Instruction, indicates the degree of severity of such injury can be established if it is recognized in the prescribed manner disfiguring.

The issue of recognizing bodily injury as a disfiguring forensic expert is not resolved;

9. For a mental disorder (disease) - the occurrence of this disorder (disease) must be in a causal relationship with the inflicted bodily injury, that is, be their consequence;

10. For a health disorder associated with an injury to the bones of the skeleton, for a period of more than four months - the duration of a health disorder over four months based on the timing of the fracture consolidation, excluding the time for further recovery of the function lost as a result of a bone fracture, treatment of the pathological consequences of injury from the soft tissues of the joints and medical rehabilitation of the injured individual.

The medical criteria for signs for less severe injuries are:

1. For a long-term health disorder - a temporary violation of the functions of tissues, organs and (or) body systems, directly related to bodily injury, its consequences, for a period of more than three weeks, and for damage associated with an injury to the bones of the skeleton - for a period of more than three weeks, but not more than four months;

2. For a significant permanent loss of general working capacity by less than one third - a permanent loss of general working capacity from 10 to 33% inclusive.

The medical criteria for signs for minor injuries are:

1. For a short-term health disorder - a temporary dysfunction of tissues, organs and (or) body systems lasting more than 6 days, but not more than three weeks from the moment of injury;

2. For insignificant permanent loss of general working capacity - permanent loss of general working capacity less than 10%.

*The medical criterion for bodily injury that did not entail a short-term health disorder or a slight persistent disability is minor short-term health effects that lasted no more than 6 days inclusive.*

### **Forensic examination of sexual conditions.**

*Forensic medical examination of male sexual conditions. A forensic examination of the sexual conditions of men is carried out only on the basis of a decision of the investigator, the person conducting the inquiry, or a court ruling.*

*Note: In urgent cases (rape, sodomy), if due to the circumstances (remoteness of the incident area from the inquiry bodies, investigative or judicial institutions, etc.) timely receipt of a decision on the production of an examination is impossible, a forensic medical examination can, in the order exceptions, made at the request of victims, as well as parents, legal representatives of minors or appropriate officials.*

The forensic medical expert must immediately notify the investigating (inquiry) authorities about the production of such an examination.

In cases where a forensic medical examination is carried out on the determination of sexual ability, puberty, infection with a venereal disease, it should be carried out by a forensic expert with the participation of a doctor - a specialist in the field of urology and venereology.

If necessary, doctors of other specialties are also involved in the examination.

The examination should be carried out in a bright and warm room and, as a rule, with sufficient daylight.

Rectal examination is performed on a high, rigid couch.

When carrying out a forensic examination of the sexual conditions of men, instruments and equipment are used: medical scales, a height meter, a soft measuring tape, a measuring ruler, a rectal mirror, sets of rectoscopes and urethroscopes, surgical tweezers, a small obstetric compass, sets of straight and curved bougie, double metal catheter, microscope, Goryaev camera, mixer for counting leukocytes, Petri dishes, measuring tubes, glass rods, slides and cover slips, a set of reagents for staining smears, universal indicator paper.

Before carrying out the examination, the forensic medical expert is obliged to establish the identity of the person being examined by checking the passport or another document replacing it with a photograph.

In the absence of a proper document with a photograph, the identity of the person being examined is certified by a representative of the investigation (inquiry) authorities who brought him for examination, about which a corresponding note is made in the expert's conclusion.

In cases where the identity of the examined person cannot be verified, he must be photographed, photographs are pasted on the expert's conclusion and its duplicate.

Examination of persons under the age of 16 should preferably be carried out in the presence of parents, a teacher or their substitute adults (of the same sex as the person being examined).

The circumstances of the incident must be communicated to the forensic expert by the investigator by submitting the case materials or describing their content in the decision on the appointment of an expert examination.

In order to clarify the details of forensic medical significance, the expert interviews the person being examined.

The children's story is recorded, if possible, verbatim. The findings should be assessed critically.

In the course of the examination, in addition to the examination of the person being examined, instrumental and laboratory research methods are used, which should be carried out only by persons who possess the appropriate methods.

In cases where laboratory tests are an integral part of the examination and their results are necessary to answer the questions posed to the expert, the expert has the right to withdraw and send the corresponding objects (sperm, smears, etc.) for research without the participation of the investigator.

The collection of sperm to determine the ability to fertilize, as well as the preparation of swabs from the contents of the rectum for examination for the presence of sperm are carried out by a forensic expert, and their examination is carried out either by this expert or in the forensic biological unit of the forensic laboratory.

Preparation of smears from the detachable urethra to detect the presence of gonococci, vaginal Trichomonas, etc., if the examined persons are not sent to a dermatovenerologic institution, is carried out by a forensic expert, and the study is carried out in the laboratories of dermatovenerologic institutions or in the bacteriological department of a forensic medical laboratory ...

The materials taken are sent for research with a cover letter from a forensic expert, packed and sealed appropriately (smears must be pre-dried at room temperature).

The results of research carried out in specialized institutions must be communicated in writing to the forensic expert in whose direction they were carried out.

In a forensic medical examination, both men and women are examined for infection with a venereal disease.

The forensic expert conducts an initial examination, and then sends the examined to a dermatovenerologic institution for a detailed examination.

Clothing that was on the person being examined at the time of the incident (in cases of rape, etc.) is subject to examination in the forensic biological unit of the forensic medical laboratory. The direction of clothing for research is carried out by representatives of the investigation (inquiry) authorities, by order of which the examination is carried out; if the clothes have not been seized, and the examination is carried out in the absence of a representative of these bodies, then, if there are suspicious marks on the clothes, the forensic medical expert is obliged to inform the investigator about the need to remove the clothes and send them for research.

For each case of forensic medical examination of sexual conditions in men, an expert opinion is drawn up.

The conclusion consists of 3 parts: introductory, descriptive and concluding.

*The introductory part of the expert's conclusion shall indicate:*

- 1) the serial number of the conclusion, hour, day, month and year of the examination;*
- 2) the grounds on which the examination is carried out;*
- 3) the place and conditions of the examination (in particular, lighting);*
- 4) position, specialty, academic degree, academic title, surname and initials of the expert (s) who performed (their) examination;*
- 5) positions, surnames, initials of the persons who were present during the examination;*
- 6) surname, name, patronymic of the person being examined, year of birth (for a minor - the date, month and year of birth), marital status, education, profession, place of work and place of residence, number and date of issue of the submitted document, by whom it was issued, in the absence of a document - surname and position of the person certifying the identity of the examined person;*
- 7) the purpose of the examination and the questions posed for its resolution;*

8) *circumstances of the case:*

- brief information related to the incident, both from the words of the person being examined, and on the basis of the data of the decision on the production of an examination and other materials of the preliminary investigation.

If by the time of the examination the necessary investigative materials and medical documents have not been submitted, then the forensic expert has the right to request them through the investigator. In this case, the examination is carried out immediately, and the expert's opinion is provided to the forensic authorities upon receipt of the required materials;

- data of medical documents, indicating their date and number, if the person being examined before the examination applied to medical institutions or to individual specialists;

- complaints of the person being examined;

- a special anamnesis, which reflects, depending on the purpose of the examination:

- past diseases, including sexually transmitted diseases, tuberculosis, diseases of the gastrointestinal tract, mental illness, etc.;

- puberty, masturbation, sex life;

- the presence of bad habits: smoking, alcohol, drugs, sleeping pills, etc.;

- professional harm.

Note: When clarifying this information, as well as subsequently when drawing up the descriptive part of the conclusion, the expert is guided by the age of the examined person, the nature of the examination and enters only the relevant data into the document.

After drawing up the introductory part of the "Circumstances of the case", the content of the information communicated by the examined person is read to him and signed by him, and during the examination of children of preschool and primary school age, it is signed by the accompanying person.

The expert has no right to acquaint the examined person with the content of the investigative materials.

*The research part of the expert's conclusion reflects the objective research data obtained by the expert during the examination:*

1) *general physical development of the examined person, including anthropometric indicators;*

*Note: If there is any doubt about the mental usefulness of the person being examined, the expert must put before the investigation (inquiry) the question of the appointment of a forensic psychiatric examination.*

1) *the severity of secondary sexual characteristics;*

2) *the condition of the external genital organs;*

3) *the condition of the anus;*

4) *damage to the body, in particular in the genital area and anus;*

5) *the results of the laboratory tests performed;*

6) *data from expert consultations.*

*The final part is drawn up taking into account, in each individual case, the investigative materials, the issues put for the permission of the examination, on the basis of objective data obtained during the production of the examination, as well as medical documents and the results of laboratory tests.*

*If, during the examination, circumstances are established that are significant for the case, about which no questions have been raised, the expert has the right to indicate them in his conclusion.*

*The expert's conclusion should, if necessary, be illustrated with photographs, fixing the damages and changes in the examined person.*

*If in the resolution (ruling) on the performance of the examination, other specialists are indicated, except for the forensic expert, then the conclusion is signed by all members of the commission.*

If specialist doctors (venereologists, etc.) consulting, give a written answer to the questions of forensic experts (and not an investigator or a court), then this answer is attached to a duplicate of the act stored in the forensic medical examination department. The expert uses the obtained data in his conclusion with the appropriate link; the conclusion is signed only by an expert.

The expert's opinion is either issued against receipt to representatives of the investigating (inquiry) authorities, or the court, by order of which the examination was carried out, or sent by mail.

The issuance of an expert opinion or certificates of the performed examination in the hands of the person being examined or other persons, except for representatives of the investigative and judicial authorities, is not allowed.

It is prohibited to inform the person being examined about the results of the survey or examination.

Reasons for conducting a forensic medical examination of the sexual conditions of men. A forensic medical examination of the sexual conditions of men is carried out to establish:

- the ability to have sexual intercourse;
- the ability to fertilize;
- puberty;
- venereal disease;
- signs of sodomy;
- signs that characterize the commission of a forced sexual intercourse by a suspect;
- gender.

Examination of the ability to have sexual intercourse. Physiological aspects. Often, a suspect denies his involvement in a crime, citing an inability to have sexual intercourse due to old age or a medical condition.

Although, starting from 50-55 years old, men experience a gradual weakening of potency, and by the age of 60-70 years it can completely fade away, but often at 80 years old a man is capable of sexual intercourse and fertilization. Consequently, there is no strictly outlined physiological limit of potency, which should be borne in mind when resolving the issue of the ability to have sexual intercourse in an elderly man.

At the same time, it is known that sexual impotence can develop at any age due to various diseases - somatic, nervous, mental. Diagnosis of impotence of this origin is very difficult, the study is carried out with the participation of specialist doctors of the relevant profile (neuropathologists, psychiatrists, urologists, venereologists). The results of previous medical examinations are taken into account (according to the submitted documentation).

Sometimes the reason for the impossibility of having sexual intercourse is mechanical obstacles in the area of the external genital organs (elephantiasis of the scrotum, large inguinal-

scrotal hernias, etc.), congenital malformations of their development (typospadias, epispadias, etc.), as well as cicatricial and other changes due to transferred diseases and injuries. This kind of condition is established by examining the suspect.

Expertise methodology. The need to establish the ability to have sexual intercourse arises in cases of: forced sexual intercourse (rape), sexual intercourse with a minor, sodomy, divorce proceedings, cases of controversial paternity, establishing the severity of bodily injury (with trauma to the genitals, damage to the central or peripheral nervous system) ...

When deciding on the ability to have sexual intercourse, the expert conducts a detailed survey and examination of the person being examined, depending on the reasons for the examination and the issues of the investigation.

When interviewing the being examined, the expert finds out:

1) A history of diseases that can have a negative effect on sexual function, venereal, endocrine, infectious diseases and injuries of the central nervous system, traumatic injuries of the genitourinary organs.

To clarify the information received about sexually transmitted or other diseases, the expert requests and examines the medical documents of the institutions in which the examined person was treated.

2) The presence of bad habits: smoking (age, number of cigarettes smoked per day), alcohol consumption (frequency and quantity), drugs, medications (sleeping pills, hormonal drugs, etc.).

3) The presence of occupational hazards (radiation, contact with lead, mercury, etc.).

4) Data on puberty and sexual life of the subject: the first appearance of emissions, their frequency; masturbation (in what period of life, frequency); the time of the onset of sexual activity; frequency of sexual intercourse (within a month, a day); the presence of deviations from the norm from the point of view of the person being examined; marriage (how many times was married); the presence of children, family conflicts in connection with sexual activity, etc.

During the examination, the expert records: physique, nutrition, height while standing and sitting, chest circumference with deep inhalation, exhalation and calm breathing, change of teeth, the presence (and number) of permanent teeth, indicating separately the wisdom teeth; examines skin reflexes (abdominal, cremasteric, anal and gluteal), notes the degree of development of hair growth on the face, in the armpits, in the pubic region (pronounced, good, weak; male or female type); durability of the thyroid cartilage; timbre of voice.

The expert establishes the correctness of the development of the external genital organs, the presence of diseases, traces of wounds and other injuries, while:

1. Measures the length (from the root to the end of the glans) and width (in the middle third and in the widest part of the glans) of a non-tense penis; fixes the state of the cavernous bodies, foreskin and frenulum: the location of the external opening of the urethra and the condition of its external lips; the presence or absence of developmental defects.

If there are seals in the cavernous bodies, the expert notes their size and nature, when describing the foreskin, he indicates its presence and mobility (whether it closes the head and moves freely behind it), etc.

2. Describes the shape of the scrotum, wrinkles, pigmentation, size (normal, decreased, increased); notes the presence of testicles in the scrotum, their consistency (soft, soft-elastic, elastic); the nature of the surface (smooth, bumpy), soreness, size (length, width, thickness).



Determines changes in the appendages (tuberosity, compaction in their head, body or tail), the state of the spermatic cord (thickness, consistency).

The examination of the testicles and appendages is performed by palpation: the researcher's hand is brought under the testicle so that the testicle lies between the palmar surface of the fingers II-V folded together and the thumb. The right testicle is examined with the left hand, the left testicle with the right hand.

*Note: To measure the penis and testicles, it is convenient to use a small obstetric compass with two metal rods mounted in its end balls up to 2.5 cm long.*

*The examination of the internal genital organs - the prostate gland and seminal vesicles - is performed with the index finger (wearing a rubber glove) through the rectum in the knee-elbow position of the person being examined or in the position on his right side.*

*The expert determines the position of the prostate gland, the approximate size, borders, surface condition (smooth, bumpy), the severity of the median groove, the uniformity of the lobes, consistency (flabby, soft-elastic, elastic, tight-elastic), the presence of seals, retractions, soreness.*

*Notes: 1. Normally, the prostate gland is elastic or densely elastic consistency with distinct boundaries. The seminal vesicles are normally soft, the presence of seals in them indicates a postponed or current inflammatory process. 2. If necessary, an instrumental examination is performed - anterior and posterior ureteroscopy and rectoscopy.*

Expert judgment on the ability of the person being examined to have sexual intercourse is based on the totality of data from the survey, examination, laboratory research, medical documents, taking into account investigative materials.

When assessing the data obtained, the expert must take into account that the cause of sexual disorders can be: serious, debilitating general diseases, diseases of the central nervous system, inflammatory and other diseases of the genital organs; endocrine disorders; genital deformities (eg, severe epi- or hypospadias); mechanical damage to the penis and organs of the scrotum, the presence of scars and seals in the corpora cavernosa; lesions of the prostate gland (persistent flabbiness, uneven bumpy surface, an increase in one of the lobes, etc.).

If the examined person reports impotence, but the expert does not find objective reasons for the inability to perform sexual intercourse, then in order to judge the sex life of the examined person, it is necessary to study the documents of medical institutions to which the examined person applied, familiarize himself with the protocols of interrogations of the victim, the wife of the examined person, consult the examined person with a neuropathologist, endocrinologist, etc.

If it becomes necessary to establish the correspondence of the size of the genital organs of the examined person and the victim (mainly in cases of rape of young girls), then the measurement of the patient's penis, in a state of erection, and the entrance of the victim's vagina is made.

In the event of a discrepancy in size, the report indicates the possibility or impossibility of having sexual intercourse without causing harm to the victim.

Fertility examination. The examination of the ability to fertilize is carried out when resolving the issue of controversial paternity, as well as in cases of rape, cohabitation with minors, divorce cases, etc.

The examination is carried out in the usual manner, with a detailed examination of the external and internal genital organs.

When interviewing, they find out the data by which it is possible to judge the violation of the ability to fertilize:

1. Ported and currently available:

- venereal and non-venereal inflammatory diseases of the prostate gland, seminal vesicles, testicles, epididymis and urethra;
  - infectious diseases - mumps, malaria, typhus, tuberculosis, etc.;
  - diseases or injuries of the central nervous system, injuries of the genital organs and pelvic bones, accompanied by dysfunction of the genital organs;
2. Bad habits (abuse of alcohol, nicotine, drugs, hormone drugs, sleeping pills, etc.);
3. Occupational hazards leading to a decrease in sexual function;
4. Information about the sex life of the person being examined.

When evaluating the data obtained during the examination of the genitals, you need to keep in mind the following:

1. If a narrowing of the urethra is found, in order to establish the possibility of sperm passage, an instrumental examination should be carried out - bougienage and urethroscopy, X-ray examination.

2. Malformations of the penis - severe epi- or hypospadias (hilar or scrotal) are not absolute evidence of the inability of the examined person to fertilize.

3. Compaction and tuberosity of the testicles indicate the transferred inflammatory process, which, if both testicles are affected, may cause azoospermia. The defeat of only one testicle, while maintaining the function of the other, usually does not entail a loss of productive capacity.

4. Lumps in the appendages also indicate an inflammatory process or injury; bilateral lesion of the appendages, as a rule, is an objective sign of inability to fertilize, however, in some cases, unilateral lesion of the appendages can also cause azoospermia.

5. Expressed cicatricial changes in the area of seminal vesicles and prostate gland (even in the absence of other data) can cause azoospermia.

Semen examination is the main method for determining the fertilizing ability of men.

It is most advisable to examine the ejaculate after 7-10 days of abstinence from sexual intercourse.

Obtaining sperm from minors is permissible only through the production of massage of the prostate gland and seminal vesicles.

The ejaculate is collected in a clean Petri dish heated to body temperature.

A study of the "last drop" after ejaculation is mandatory, for which a drop of sperm is squeezed out of the urethra by a light massage of the penis, from the root to the head, which is transferred to a glass slide for subsequent microscopic examination. The presence of motile spermatozoa in the "last drop" in the absence of such in the presented examined ejaculate indicates its substitution or the addition of any substances (acids, etc.)

The study of the ejaculate should be carried out as soon as possible after receiving it (no later than 3 hours) and includes:

- 1) physical examination: determination of color, transparency, viscosity, volume;
- 2) determination of pH (if necessary);
- 3) microscopic examination: fresh - establishing the number and mobility of spermatozoa; after staining - the search for pathological forms and shaped elements of the ejaculate.

1) Physical examination:

- the color and degree of transparency of the ejaculate is determined by eye - normally the ejaculate is grayish with a whitish tint, turbid (red color may be due to the presence of blood, yellow - pus; brown or brown tint of the ejaculate is associated with age-related changes or indicates a long period of sperm production );

- the viscosity is determined 30 minutes after receiving the ejaculate when stored at room temperature, when sperm liquefaction usually occurs. With normal viscosity, sperm drips down from a wooden or glass rod dipped in it. An increase in viscosity may indicate prostate disease;

- the volume of semen is determined in a measuring tube, where it is poured after liquefaction from a Petri dish.

2) *Determination of pH:*

*Semen pH is determined using universal indicator paper; normal for semen is a slightly alkaline environment.*

3) *Microscopic examination:*

*Microscopic examination includes a general examination of a drop of ejaculate in a native preparation, counting the number of spermatozoa and sperm cells, examination of a stained smear in order to identify pathological forms.*

1. At a general examination of the native preparation, the motility of spermatozoa is established at low and high magnification of the microscope.

2. The number of spermatozoa is determined by counting them in the Goryaev's chamber. First, the total sperm count in 1 ml of semen is counted. To do this, in a mixer (used for counting leukocytes), the ejaculate subjected to liquefaction is collected to the mark "0.5" (or "1.0" with a small number of spermatozoa) and diluted with any solution; causing immobility of sperm, for example, soda-formalin liquid (5 g of sodium bicarbonate, 1.0 ml of formalin and 100 ml of distilled water). The solution is taken up to the mark "11", the ejaculate is stirred by shaking the mixer, the first drop is released onto the gauze, and the second drop is introduced into the counting chamber. In five large squares on the diagonal, all spermatozoa in them are counted, the heads of which lie inside the squares. The resulting amount multiplied by 1,000,000 (when diluting semen 20 times, ie, set up to the mark "0.5") will be the number of sperm in 1 ml of semen.

3. The number of immotile spermatozoa in the ejaculate is counted in the specified manner, however, the ejaculate is diluted with saline (in another mixer), in the squares immobile spermatozoa are taken into account. The amount obtained, multiplied by 1,000,000 (when diluted 20 times), will be the number of immotile sperm in 1 ml of semen.

The number of motile spermatozoa is determined by the difference between their total number during immobilization and the number of immotile spermatozoa obtained by diluting sperm with saline.

Note: In the clinic, it is considered normal to have more than 60 million sperm in 1 ml of ejaculate. With a sperm count of less than 20 million in 1 ml of ejaculate, clinicians diagnose severe oligozoospermia. However, from a forensic medical point of view, the presence of even one normal motile sperm in the ejaculate no longer gives grounds for asserting the complete inability of the person being examined to fertilize. With a small number of spermatozoa (oligozoospermin), the expert's conclusion can only indicate that the probability of fertilization is reduced, but the ability to fertilize cannot be completely ruled out.

4. Identification of pathological forms of spermatozoa is performed in stained smears. For example, an air-dried and flame-fixed sperm smear is treated with 1% chloramine solution (to remove mucus), washed with water and 95 ° alcohol. Then they are stained for 2-5 minutes with a mixture of fuchsin with eosin (2 parts of Tsil's carbolic fuchsin, 1 part of a saturated alcoholic solution of eosin, 1 part of 95 ° alcohol), tinted with Leffler's blue and examined under a microscope using an immersion system. In the presence of a large number of atypical forms of spermatozoa (deformed heads and tails, etc.), a careful re-examination of the ejaculate is necessary, since their presence may be due to random factors, including repeated previous sexual intercourse.

The presence of atypical forms can be caused both by impaired spermatogenesis and by repeated sexual intercourse preceding the study.

5. Shaped elements of the ejaculate are counted in the field of view of the microscope (low magnification, objective - 20 or 40, eyepiece 10 or 15).

These include: erythrocytes and leukocytes, epithelial cells, lecithin grains, amyloid bodies. Normally, the ejaculate contains single leukocytes, epithelial cells, amyloid bodies and a large number of lecithin grains. An increase in the number of leukocytes indicates an inflammatory process in the genitourinary organs. A decrease in the number of lecithin grains indicates a decrease in prostate function.

The conclusion about the fertilizing ability of the subject is based on the entire set of studies.

Examination of puberty. A forensic examination of puberty in males is carried out in relation to minors in cases related to sexual offenses.

Puberty in males is characterized by such a state of general physical development and formation of the gonads, in which sexual activity is a physiologically normal function, does not cause health disorders and does not harm the further development of the body.

When examining, take into account: the general physical development of the body, the development of the external and internal genital organs, the ability to have sexual intercourse and fertilization. Each of these signs individually is not decisive, only their combination enables the forensic expert to correctly answer the question of puberty.

Conduct a survey and examination of the person being examined. They collect information about past illnesses, bad habits and about the sexual development of the person being examined (the time of the emergence of interest in the sexual issue, the appearance of an erection of the penis and emissions, masturbation).

If the examined person was treated for diseases affecting sexual function, they study the data of medical documents, including the school dispensary card.

The achievement of sexual maturity is indicated by pronounced secondary sexual characteristics and sufficient development of the external and internal genital organs: the vegetation on the face (lips, chin) is well expressed, hairiness in the armpits occupies their entire surface, hairiness in the pubic region extends to the scrotum and the inner surface of the upper third hips; the thyroid cartilage is clearly visible during swallowing movements; the timbre of the voice is low; the penis is developed correctly, the skin of the scrotum is pigmented, wrinkled, the testes are normal in size, elastic, with clearly delimited appendages, the borders of the prostate gland, the median groove and lobes are clearly palpable, the gland has an elastic consistency.

If the expert is asked about the ability of the person being examined to fertilize, a study of the seminal fluid is performed.

The conclusion about the attainment of the surveyed sexual maturity is given by a combination of signs. In this case, the expert may come to the conclusion that the examined person has not reached sexual maturity and cannot perform sexual intercourse, or he has not reached sexual maturity, but he can perform sexual intercourse, or he has fully reached sexual maturity.

Examination of a venereal disease. A forensic venereal examination is carried out to establish the presence or absence of a venereal disease in the examined person, if a relevant question arises in the course of a criminal investigation or a civil claim in courts (on divorce, alimony, acknowledgment of paternity, etc.).

In forensic practice, infection with syphilis or gonorrhoea occurs.

It should be borne in mind that the same person can have syphilis and gonorrhoea at the same time.

Syphilis and gonorrhoea are characterized by a certain constancy of the development of the clinical picture and the timing of the onset of individual manifestations of the disease from the moment of infection (infection).

There are the following stages of syphilis:

1) Primary seronegative syphilis.

Chancre appears 3-3.5 weeks after infection.

2) Primary seropositive syphilis.

Seroreactions become positive after 6-8 weeks after infection and 3-4 weeks after the appearance of a hard chancre.

3) Secondary fresh syphilis.

After 8-10 weeks from the moment of infection, a rash (profuse, roseolous-papular with predominant localization on the lateral surfaces of the trunk and extremities). Seroreactions are positive. During this period, erosive and hypertrophic papules may appear in the genital area, in the folds of the skin prone to maceration.

4) Secondary recurrent syphilis.

After 4-5 months from the moment of infection - scanty rashes with a tendency to group elements with the formation of figures (arcs, rings), the number of elements is less, the elements themselves are larger. The more time has passed since the moment of infection, the less the number of elements of the rash.

Leucoderma with a typical location on the back of the neck is observed 5-6 months or more after infection. Widespread warts can appear throughout recurrent syphilis. The earliest time for their appearance is 4-5 months from the moment of infection. Alopecia areata - usually observed 5-6 months after infection.

Rashes on the palms and feet indicate the presence of a secondary relapse of late syphilis, or a rapidly flowing secondary fresh syphilis (in this case, there should be a hard chancre).

On the mucous membrane of the mouth and pharynx, papular elements, more often with an erosive surface, cicatricial changes, and syphilitic tonsillitis, can be observed.

5) Tertiary syphilis.

If untreated, it occurs after 3-4 years or more. It is weakly contagious and is rare in forensic practice.

There are the following forms of gonorrhoea:

1) Fresh gonorrhoea: acute, subacute, torpid.

In acute or subacute form, purulent discharge and pain at the beginning of urination appear, as a rule, 3-7 days after infection.

The fresh torpid (asymptomatic) form is characterized by the presence of gonococci and minor manifestations of the disease or even the absence of symptoms. Its duration is no more than 2 months from the moment of infection.

2) Chronic gonorrhoea is a sluggish disease lasting more than 2 months or when it is not possible to establish its prescription. Consideration should be given to the possibility of exacerbation of a chronic process. It is very important in this case to differentiate it from fresh gonorrhoea: take into account the duration of the period that has elapsed from the moment of infection, as well as the prevalence of the process on the genitourinary system, which is more pronounced in chronic gonorrhoea.

3) Latent gonorrhoea, in which neither clinical symptoms of the disease nor gonococci can be detected, even in cases where the patient is a known source of infection.

Interviewing of the being examined is carried out as indicated in the section "Examination of the ability to have sexual intercourse". Then they find out the circumstances that directly or indirectly may indicate the presence of a venereal disease. When reporting a sexually transmitted disease in the past, they ask about the treatment, bearing in mind that relapses more often occur after insufficient treatment.

The survey is carried out according to the general plan, but has features:

1. Examine the scalp, the mucous membrane of the mouth and throat, the skin of the face, neck, trunk and extremities. At the same time, attention is paid to the presence of a rash, its localization, the period of appearance after sexual intercourse, the intensity, the tendency to grouping individual elements of the rash into figures; the presence of painless ulcers or erosions in the oral cavity.

2. Check whether there are traces of injections and infiltrates in the elbow folds or gluteal region, which may indirectly indicate the specific treatment carried out.

If a specific infiltrate is suspected, an X-ray examination is performed to reveal the metal (bismuth) deposited in the area of the infiltrate.

3. Check the cervical, axillary, elbow and inguinal lymph nodes. Syphilis is characterized by enlarged lymph nodes of a densely elastic, close to cartilaginous consistency, painless, not welded to the surrounding tissues.

4. Examine the genitals for the presence of ulcers, erosions, scars after hard chancre, discharge. In the presence of discharge from the urethra, they find out how long after intercourse they appeared, their nature (purulent, mucous, serous, abundant, scanty), whether they are accompanied by cuts at the beginning or at the end of urination; make a smear on a glass slide, which is sent to a bacteriological laboratory.

In the absence of discharge, the examined person is sent for a detailed examination ("provocation", examination of the secretion of the prostate gland, etc.) to the dermatovenerologic institution.

Note: To characterize the inflammatory process in the urethra in men, a "two-glass test" is carried out: the examinee is offered to urinate in two glasses in succession. In the presence of an acute process in the anterior urethra, the first portion of urine (1st glass) is cloudy, the second (2nd glass) is transparent.

With the defeat of the posterior urethra, both portions of urine are cloudy. The more acute the process, the more purulent discharge, the more turbid the urine.

Clouding of urine can occur due to its salt content. In this case, the urine will brighten when a small amount of hydrochloric acid is added to it.

5. Examine the area of the anus, since manifestations of both primary syphilis - hard chancre, and secondary - papules and wide condylomas can be located here.

If gonorrheal inflammation of the rectal mucosa is suspected, swabs are taken from the rectum or the rectum is washed using a special double metal catheter, and the washings are sent to a bacteriological laboratory to detect gonococci.

6. To identify the gonorrheal process, examine the testes, their appendages, the prostate gland and seminal vesicles (according to the method specified in the section "Examination of the ability to have sexual intercourse").

You should find out if the person being examined has taken antibiotics, since sexually transmitted diseases are treatable with them. A patient with a venereal disease, not yet knowing about the latter, can take antibiotics for another disease; as a result, the picture of a venereal disease is blurred, the incubation period is lengthened.

The use of even small doses of antibiotics by patients with gonorrhea leads to the disappearance of gonococci in the secretions. An indirect diagnostic method in this case is anterior urethroscopy, in which the detection of an inflammatory infiltrate (discoloration, swelling and absence of vascular pattern of the urethral mucosa, an incorrect "central figure") should alert the expert regarding the possibility of gonorrheal inflammation. The phenomena of inflammatory infiltrate persist for about two weeks after antibiotic treatment.

The main method for detecting syphilis in such cases is a serological examination of blood and cerebrospinal fluid.

Identification of sexual contacts and examination of their participants can help in diagnosing the disease and solving the question of the source of infection.

A woman's report of "spontaneous miscarriages" may indicate syphilis; in such cases, an appropriate neurological examination is necessary. Chancre in women can be localized not only on the external genitals, but, for example, on the cervix.

It is necessary to pay attention to the consistency of the urethra, which is determined by pressing it with a finger through the vagina to the pubic joint. Normally, the urethra is of a soft consistency, its condition in the form of a dense strand indicates the presence of a chronic inflammatory process, most often gonorrheal etiology. The consequence of the gonorrheal process is also often bilateral chronic inflammation of the appendages and bilateral inflammation of the Bartholin glands and their duct.

In women, smears are taken from the urethra, cervix and rectum on one slide, previously divided into three parts.

The final diagnosis of a venereal disease is established: in cases of syphilis - after a serological blood test, if necessary - cerebrospinal fluid (Wasserman's reaction and sedimentary reactions), studies for a pale spirochete of scraping from a hard chancre, the surface of papules or erosions, punctate of the lymph node; in cases of gonorrhea - after bacteriological examination of the discharge of the urethra for gonococci (smear, culture).

All these studies should be carried out in specialized institutions - venereal dispensaries or dermatovenerologic offices of polyclinics or dermatovenerologic departments of hospitals.

Establishing signs of sodomy. When conducting a forensic medical examination about sodomy, they find out:

1. sexual ability of the examined person (see the section "Examination of the ability to have sexual intercourse"); sexual ability in homosexuals may be reduced, but their sexual weakness manifests itself in such cases, mainly in relation to women.

2. whether the examined person engaged in masturbation, during what period of his life, how often;

3. when and under what circumstances began to engage in homosexuality;

4. is registered with a psychiatrist; in the positive case, medical documents are requested in order to clarify the diagnosis of the disease and the nature of the symptoms.

The survey is carried out according to a general plan (see the section "Examination of the ability to have sexual intercourse"), but has some features:

If an active partner is examined, then in addition to examining and measuring the penis, they find out if there are fecal particles on the penis (and pubic hair). The area of the coronal groove and groove on both sides of the bridge is especially carefully examined. If foreign particles are found, then prints are made by firmly pressing a clean glass slide against a suspicious spot on the penis.

A slide with the resulting prints and pubic hair, with particles suspicious of feces, are examined under a microscope by a forensic medical expert himself who has the necessary training, or sent to the forensic biological department of a forensic laboratory for the purpose of examination for the presence of parts of feces (vegetable fiber, muscle fibers, eggs, worms, etc.), as well as blood tests, if the passive partner has rectal damage.

If possible, then conduct a bacteriological examination of the prints of the penis for the presence of *E. coli*.

Note: Men who do not regularly toilet the penis (especially if the penis has a closed foreskin) and the area of the coronal groove under the foreskin accumulates grayish-whitish or yellowish sperm. Under the microscope, it looks like amorphous lumps without the characteristic cellular structure inherent in plant cellulose or muscle fibers.

When examining the penis, attention is paid to the presence of hemorrhages, abrasions, adhered hair, foreign substances, in particular petroleum jelly.

Note: If you suspect the presence of petroleum jelly, the penis is wiped with a gauze or cotton swab, which is then sent for examination to the forensic chemistry department of the laboratory of the forensic medical examination bureau.

In active partners, even in cases of systematic sexual intercourse through the anus, there are no anatomical changes in the penis characteristic of sodomy.

When examining the alleged passive partner, it is necessary to pay attention to complaints in connection with gastrointestinal diseases, the presence of complications or residual effects of these diseases (chronic constipation or diarrhea); find out if he suffered from rectal diseases (hemorrhoids, proctitis, paraproctitis, rectal prolapse, dysentery, whether there were any surgical interventions in the anus for non-healing cracks, hemorrhoids, etc.), since the consequences of these diseases can be mistaken for the changes associated with systematic sodomy as a passive partner.

They ask about the existing and past sexually transmitted diseases. If necessary, medical documents are requested from medical institutions, which may contain information that is



important for clarifying the issue of sexual intercourse through the anus (for example, the presence of a solid chancre in the anus in the examined past).

In order to identify signs characteristic of passive partners, a detailed examination of the anus is performed. The examination is carried out in the knee-elbow position of the person being examined on the couch.

1. First, establish whether there are any injuries on the body, in particular - bruises on the buttocks from finger pressure; note the state of the intergluteal fissure (deep, shallow). Then the buttocks are slightly shrugged and begin to examine the anus and radial folds, indicating their condition (pronounced, unexpressed, smoothed; soft, rough), color and its degree.

When scars are found, their nature is described (linear, irregular, retracted, non-retracted, dense, loose, etc.), localization (it is customary to conventionally mark their location in relation to a circle divided into 12 equal parts by analogy with a watch dial, indicating the position of the examined (knee-elbow, on the back).

2. Mark the condition of the anus area (in the form of a small depression, a wide or retracted funnel) and anus (does not gap, gapes slightly, significantly).

Having identified a funnel-shaped retraction, it must be borne in mind that in some people the area of the anus may normally look like a narrow or wide funnel. In such cases, the funnel is formed only by the mucous membrane.

Funnel-shaped retraction in passive partners is formed, starting from the area of the skin of the anus, and passes to the mucous membrane of the rectum, so that the walls of the funnel consecutively consist of the skin and mucous membrane of the anus.

Note: It must be remembered about the possibility of deliberate (volitional) contraction of the sphincters, which can lead to some blurring of the existing funnel-shaped retraction. In such cases, a longer study of the contractility of the sphincter should be made, since such a "volitional" contraction cannot be maintained for a long time.

3. For further examination, with the thumbs located parallel on both sides of the anus at a distance of 2-2.5 cm, push apart the buttocks and stretch the anus. Normally, the anus is closed; with weakness of the sphincters, which, along with various other reasons, may be due to sexual intercourse through the rectum, the anus gapes to a greater or lesser extent.

Examine the visible part of the rectal mucosa. The coloration of the rectal mucosa is noted (pale pink, pink, reddish, red, purple-red, purple-cyanotic), since for sexual intercourse through the anus, irritation of the rectal mucosa is characteristic, and its degree depends on the frequency of intercourse and a number of other reasons arising from sodomy - the introduction of infection (gonorrheal proctitis, etc.). In some cases, in persons with whom the act of sodomy is committed, fresh injuries are noted in the area of the anus and on the rectal mucosa in the form of bruises, cracks, abrasions or wounds. If such damage is present, describe its nature, shape and location. Осмотр слизистой прямой кишки следует начинать с так называемой переходной складки (границы слизистой и кожи анальной области) с целью выявления продольных трещин, ссадин, разрывов.

The most common injuries are cracks, which, as a rule, are located longitudinally between the folds of the mucous membrane on the anterior and partially on the lateral walls of the rectum. They heal quickly (especially in children), after about 3-5 days.

Abrasions located at the tops of the folds of the mucous membrane are characteristic of the action of a solid object, the end of which forms a face. Such an object, when introduced into

the rectum, scrapes the folds of the mucous membrane, as it were. The penis does not form such lesions on the mucous membrane.

In some cases, oval abrasions are observed, capturing the entire mucosa: the top of the folds and the space between them (mainly in children with whom the act of sodomy is committed).

On the rectal mucosa, there may be breaks with edges wrapped inward, in the form of right angles, one of the sides of which is located transversely to the rectum, and the other has a longitudinal direction. Such injuries are typical for the forcible introduction of the penis into the rectum without preliminary lubrication with substances that reduce friction (petroleum jelly, etc.).

*Note: Examination of rectal mucosa with a rectoscope may be performed by a forensic medical examiner or an appropriate specialist.*

*For the purposes of forensic medical examination, rectoscopic examination is carried out to a depth not exceeding 10 cm.*

*To examine the external and internal sphincters of the rectum, the person being examined in the knee-elbow position and the rectum are inserted with the index finger (a rubber glove is lubricated with petroleum jelly). The sphincter, which has a good tone, tightly covers the inserted finger (ring symptom), the relaxed sphincter covers the finger weakly, allowing in some cases the movement of the finger in the vertical plane. It should be remembered about the possibility of artificial ("volitional") contraction of the sphincter.*

*In fresh cases, when the passive partner or the victim after intercourse in the anus did not have an act of defecation, they take the contents from the rectum with a cotton swab and make smears.*

The smears are dried at room temperature and examined after staining with fuchsin. If no sperm is found in smears, the tampon should be examined. The swabs and swabs are examined by the expert himself or sent to the forensic biological department of the forensic laboratory.

If the tampon is immediately transferred for examination to a forensic laboratory, it is placed in a test tube, but if it will be examined only after a certain period of time, it is pre-dried at room temperature.

*Note: To prepare a swab, the edge of a piece of cotton is clamped between the jaws of the surgical forceps, the rest of the cotton is wrapped several times around the end of the forceps. The tampon is inserted into the rectum about 3-5 cm (not deeper) and in a circular motion, with some pressure, wipe the rectal mucosa (in order to straighten the pockets of the mucous membrane in which sperm accumulates), then remove and make 5-6 smears on the slides.*

In fresh cases, in the anus and perineum of the passive partner (or victim), there may be adhered pubic hair of the active partner, traces of dried sperm. They should be removed and sent for research to the forensic biological department of the forensic laboratory.

Single acts of sodomy, as a rule, do not leave persistent changes in the anus and rectum (the only exceptions are cases accompanied by significant damage, after the healing of which scars remain). Superficial damage to the mucous membrane and skin that occurs in the anus and rectal mucosa usually disappears without a trace.

For persons who systematically commit acts of sodomy as passive partners, the following changes in the anus and rectum are characteristic: funnel-shaped retraction, gaping of the anus, flattening of the radial folds around the anus and rectal mucosa, relaxation of the sphincters and purple-red with a bluish tinge coloration of the rectal mucosa.

The degree of intensity and manifestation of these signs may be different, some of them may be absent altogether.

On the clothes of the passive partner (victim) there may be traces of semen, feces. If there is reason to believe that they arose during the act of sodomy, then the clothes should be examined in the forensic histological department of the forensic medical laboratory in order to establish the group belonging of the sperm (which may come from an active partner), to identify fecal particles in the sperm stains.

In cases of investigation of lecherous acts against minors, the examination is carried out as indicated in this section, and attention is drawn to damage and changes in the genital area and anus.

Establishment of signs that characterize the commission of forced sexual intercourse. Forensic examination of a rape suspect. A forensic medical examination of a person suspected of committing rape should be carried out as soon as possible from the moment of the incident.

When inspecting clothes, attention is paid to damage (tears, lack of buttons, etc.), pollution (earth, clay, lime, grass, etc.). stains suspicious of blood, feces, saliva, etc., as well as the presence of hair, tissue fibers (which may belong to the victim) on clothes, recording the necessary data in the expert's opinion.

*Note: In cases of rape, clothing contamination usually has a characteristic localization: in the area of the knee joints in front, the back surface of the elbow joints and forearms, and shoe socks. Contamination of clothing can sometimes indicate the presence of the witness in a certain place, which, together with the testimony of the victim and the objective circumstances of the case, can be significant.*

*The items of clothing of the examined person with stains suspicious for blood, etc., should be seized by the investigator and sent for examination to the forensic-biological department of the forensic medical laboratory to resolve questions about the presence of blood, its species and group affiliation. If there is a trained specialist in the laboratory, a blood test can be performed on gender.*

It should be borne in mind that although usually the detection of sperm on the clothes of men suspected of rape is not evidential, however, on the clothes of a person suspected of gang rape, the sperm may come from another participant in the rape, as a result of which the determination of the group belonging of sperm in such cases acquires value.

An examination of the physical condition of the person being examined is carried out to establish his development, strength, the severity of secondary sexual characteristics and other data that are significant for the case.

In cases of rape, accompanied by active physical resistance of the victim, injuries occur on the abuser's body in the form of various abrasions and bruises located on the face (lips, tongue), neck, hands, knee and elbow joints. These injuries are quite characteristic, they arise from the action of the fingernails, from the teeth. There may also be genital bites.

In persons who have committed rape, mechanical injuries on the body as signs of a woman's struggle and self-defense are found quite often (in about 40% of cases, with attempted rape - in 65%).

On the genitals and in the pubic area, the following can be found: damage to the head and foreskin of the penis (tears of the frenum, fresh bruises and abrasions); traces of blood (most often remain in the area of the bridle), loose hair. The hair found should be removed and sent to the forensic biological department of the forensic laboratory of the forensic medical

examination bureau for a comparative study with the hair of the person being examined and the victim.

If there is an expert in the forensic biological department with the necessary training and experience, a study of the material from the penis to vaginal cells and to the group belonging of the vaginal discharge can be made.

There may be blood under the suspect's nails, fibers of the victim's clothing material, therefore, the contents from under the nails are sent to the forensic biological department of the forensic laboratory; the latter, upon detection of clothing fibers through the investigator, sends them to the appropriate scientific research laboratory of forensic examinations; clothing fibers removed from the suspect's penis can also be directed there.

When examining the head and foreskin of the penis, attention is paid to the state of their epithelial integuments. The presence of sperm deposits in the preputial sac may indicate that the person being examined did not perform a full intercourse with the introduction of a penis into the vagina in the nearest time before the examination.

The injuries and features found on the body and clothing are described with an indication of their location, nature, size, color, etc. With regard to injuries on the body, in addition, they decide on the time and mechanism of their occurrence.

*Forensic obstetric and gynecological examination. The forensic obstetric and gynecological examination is carried out on the basis of the decision of the investigator, the inquiry officer.*

*The effectiveness of the results of this examination is the higher the earlier after the incident it is carried out, therefore, in some cases, when due to the prevailing circumstances (the remoteness of the incident area from the inquiry bodies, investigative or judicial institutions, etc.), it is impossible to timely obtain a resolution on the performance of the examination, a medical examination of victims with a detailed description of all revealed objective data can, as an exception, be carried out at the request of the victims themselves, as well as parents, legal representatives of minors and other persons, about which the forensic expert must immediately notify the investigation (inquiry) authorities.*

*In these cases, the "Expert Opinion" is drawn up on the basis of the results of the examination after receiving the order on the appointment of the examination.*

A forensic obstetric and gynecological examination can be carried out on a commission - in conjunction with an obstetrician-gynecologist. If during the examination of sexual conditions other special medical knowledge is required, then the appropriate specialists are included in the expert commission.

When an examination is carried out by one forensic medical expert, it is carried out in the presence of a paramedical worker working with the expert.

The examination of the external and internal genital organs of the examined person should be carried out on a gynecological chair.

During the examination, the following are used: a pelvis meter, a soft measuring tape, Cuzco mirrors, a circular hymenometer, surgical tweezers, a bell-shaped probe, sealed tubes with sterile gauze swabs fixed on wooden rods, sterile gauze napkins.

The seizure and direction of materials for laboratory research (contents of the external os of the cervix, vagina, secretions of the mammary glands, etc.) in the course of the examination is carried out by a forensic expert. The seized materials are sent to the forensic biological

laboratory with an accompanying document of the forensic medical expert, packed appropriately and in a sealed form.

Laboratory research data are entered into the research part of the "Expert Conclusions" and are used in drawing up conclusions.

To exclude possible infection with sexually transmitted diseases, the forensic expert sends the person being examined for examination to a dermatovenerologic dispensary. The results of the examination must be communicated in writing to the forensic expert in whose direction the research was carried out.

When drawing up conclusions, the expert uses the obtained data.

Before carrying out an examination, a forensic medical expert is obliged to establish the identity of the person being witnessed by checking a passport or another document with a photograph replacing it.

In the absence of a proper document with a photograph, the identity of the witness is certified by a representative of the investigating (inquiry) authorities who brought her for examination, about which a corresponding note is made in the expert's conclusion.

In all other cases, the witness must be photographed, the photographs are pasted on both copies of the "Expert Opinion".

The examination of persons under the age of 16 is carried out upon presentation of a passport (birth certificate), in the presence of parents who replace them as adults or a teacher.

To clarify the circumstances of the incident, one must first listen to the story of the witness, and then clarify the details by questioning.

The children's story should be approached carefully, writing it down verbatim as much as possible, and the information received from the children should be evaluated critically.

Items of clothing that were on the victim at the time of the incident, which may contain traces of sperm, blood, are sent for examination to a forensic biological laboratory by representatives of the investigation (inquiry), by order of which an examination is carried out.

In cases where the clothes were not previously seized, and the examination is carried out in the absence of a representative of these bodies, the forensic expert must immediately notify him of the need to remove the clothes and send them for examination. The witness in these cases is warned to keep the clothes and not wash them.

The "expert opinion" in the production of a forensic obstetric and gynecological examination consists of 3 parts: an introductory part, a research part and a concluding part.

The introductory part of the expert's opinion shall indicate:

- 1) serial number, hour, day, month and year of the examination;
- 2) the grounds on which the examination is carried out;
- 3) place of production and conditions for the examination (in particular, lighting - natural, artificial, sufficient, insufficient);
- 4) position, specialty, academic degree, academic title, surname and initials of the expert (s) performing (their) examination;
- 5) positions, surnames, initials of persons present during the examination;
- 6) surname, name, patronymic of the witness, date of birth, marital status, education, profession, place of work and place of residence, when and by whom the identity document was issued, its number;
- 7) issues to be resolved;
- 8) the circumstances of the case, setting out:

- brief information related to the incident, both from the words of the witness, and on the basis of the data of the decision on the examination and other materials of the preliminary investigation. If by the time of the examination the necessary investigative materials have not been submitted, then the forensic expert will request them from the relevant authorities; in this case, the examination is carried out immediately, and the "Expert's Conclusion" is submitted to the judicial and investigative authorities upon receipt of the required materials;

- these medical documents with an indication of their date and numbers, if the person being certified before this examination has applied to medical institutions or to individual specialists;

- complaints witnessed;

- a special history, which reflects: a) the time of onset, the nature and duration of menstruation, the duration of the menstrual cycle, the date of the first day of the last menstruation; b) sexual life, including the time of the last sexual intercourse; c) pregnancy: quantity, course; abortion; childbirth: quantity, course; postpartum diseases; discharge; d) the transferred operations; diseases (including meningitis, encephalitis, syphilis, tuberculosis, etc.).

Note: When clarifying this information, as well as subsequently, when drawing up the research part of the conclusion, the expert is guided by the age of the witnessed, the nature of the examination and enters only the relevant data into the document.

*The research part "Expert Conclusions" reflects the objective examination data obtained by the expert during the examination:*

1) *the general development of the person being examined: physique, nutrition, height, malformations, etc.;*

2) *secondary sexual characteristics: the degree of development of the mammary glands - size, shape, elasticity, condition of areola and nipples, their color, absence or presence of discharge from the mammary glands; the nature and degree of hairiness in the armpits, pubis and labia majora;*

3) *the condition of the external genital organs: the correctness of their formation (deformities), features of the shape and size of the labia and clitoris, the condition and color of the mucous membranes; the state of the external opening of the urethra; discharge and their nature;*

4) *the state of the hymen: shape (annular, crescent, etc.), height (width), thickness, consistency (fleshy, dense), the nature of the free edge (thin, thick, serrated, smooth, patchwork, etc.), size (diameter) and shape of the hole (round, oval, slit-like), extensibility of the hymen, with several holes - their number and nature of the partitions, natural notches of the hymen - the nature, color and density of their edges, depth, location, symmetry of location and their relation to the pillars of the folds of the vagina, the presence, nature and location of damage; the presence of a ring of contraction when the fingertip is inserted, the condition of the internal genital organs;*

Note: *In a forensic examination of the hymen, they use the following technique: with the index and thumb of both hands, they grasp the skin with subcutaneous tissue at the base of the large lips and pull it anteriorly, to the sides and downward. At the same time, the entire hymen in a stretched state and its free edge are clearly visible.*

5) *injuries on the body: special attention is paid to the presence, localization, size, shape, color and nature of injuries (for example, crescent-shaped abrasions from the action of nails,*

*bruises from finger pressure, etc.) in the face, neck, mammary glands, external genitals, inner thighs and lower legs;*

*6) in the event of the seizure of any materials for laboratory research (smears from the external pharynx of the cervix and vagina, discharge, etc.), this circumstance is noted in the expert's conclusion indicating what exactly and from where it was withdrawn, where and for what purpose it was sent ...*

*The final part of the "Expert Conclusion" is drawn up taking into account the issues to be resolved, on the basis of objective data obtained during the examination, and the results of laboratory studies. If, in the course of the expert's examination, the expert (experts) have established circumstances that are significant for the case, about which he (they) were not asked questions, he (they) have the right to indicate them in the conclusion.*

*The "expert opinion" should, if necessary, be illustrated with photographs showing injuries on the body, etc.*

*Note: Photographing can be made only with the consent of the victim, by a person with medical education.*

*The "expert opinion" shall be made up in at least two copies, one of which is transferred in accordance with the established procedure to the person or body that appointed the examination, and the other remains stored in the archives of the expert departments.*

*It is prohibited to issue an expert opinion on hand, witnessed or to other persons other than representatives of the said bodies.*

*Reasons for conducting a forensic obstetric and gynecological examination. A forensic obstetric and gynecological examination is carried out to establish:*

- 1) violation of virginity;*
- 2) signs that characterize the commission of sexual intercourse;*
- 3) signs that characterize the commission of lecherous acts;*
- 4) the ability to copulate and to conceive;*
- 5) pregnancy and previous childbirth;*
- 6) the connection between termination of pregnancy and trauma;*
- 7) artificial termination of pregnancy;*
- 8) gender.*

*Characteristics of bodily injury in sexual crimes. Signs of physical violence are in the form of mechanical damage: skin abrasions, scratches, bruises, and rarely wounds. Their predominant localization in sexual crimes is in the area of the external genital organs, the inner surfaces of the thighs and lower legs, on the neck and shoulders, around the mouth, on the mammary glands. This, however, does not exclude the location of damage in any other area of the body.*

*Establishment of violation of virginity. Anatomical and physiological features. The main criterion for virginity, that is, the state when a woman did not live sexually, is the intact anatomical integrity of the hymen.*

*The left arm is a duplicate of the vaginal mucosa and restricts the entrance to it. The basis of the hymen is connective tissue containing elastic fibers and muscle bundles. The mucous membrane covering the hymen is represented by stratified squamous epithelium, not entirely of the same type from the outside and from the inside.*

*Distinguish between the base of the hymen, its free edge, which forms an opening, the vaginal (or upper) and external (or lower) surfaces.*

Depending on the number of muscle fibers in the thickness of the hymen, it can be relatively thick, "fleshy" or, conversely, thinner, more tender.

It is necessary to distinguish between two main forms of the hymen, due to the location of the hole: annular, or circular with the central localization of the hole and semilunar, when the hole is located eccentrically, often from above, closer to the opening of the urethra.

Numerous variations in the appearance of the hymen are associated either with the number of holes or with the features of the free edge, as well as the surface.

So, there may be an overgrown (non-perforated, or blind) hymen, when the hole is absent at all; baffled when the hole is divided into two parts by a longitudinal or transverse partition; fenestrated when there are four holes; lattice or mesh, when there are more of them.

The free edge of the hymen can be even and smooth, but often natural notches are noted along its length. Depending on their number and depth, the hymen takes on the appearance of a jagged or fringed (when there are many notches, but their depth is small), patchwork or lobular (when the notches reach the middle or deeper, up to the base of the hymen, dividing it into separate flaps or lobes).

Both the annular and semilunar hymen can be characterized by one or more processes protruding into the lumen. Such a hymen is designated as a process. With a protruding fleshy lower part and a smoothed upper part, the hymen takes on the appearance of a keel and is defined as keeled.

The height of the hymen can also be different, more often within the range of 1.0-1.6 cm, but it can be slightly more (up to 2-2.5 cm), or, conversely, less. Sometimes the hymen is very low, represented only by a small fold of the vaginal mucosa, in rare cases, there is a congenital absence of the hymen.

At the first sexual intercourse, usually there is a rupture of the hymen - defloration. The gap can be one, sometimes two, in rare cases - more. Most often they are located in the posterior-lower segments (on the hour dial at the level of 4 to 8 o'clock), but they can also be in other areas. The tears reach the base of the hymen, less often superficial tears occur.

When an expert assessment of the fact of a rupture of the virgin head, it should be borne in mind that tears and tears of the hymen are not always the result of sexual intercourse. They can be inflicted by hands during lecherous actions or by some object inserted into the vagina. In very rare cases, ruptures of the hymen occur with general trauma to the genital area.

It should also be taken into account that in some forms of the hymen (patchwork, lobed, sometimes - fringed), when it has significant extensibility, the introduction of the penis into the vagina may not cause rupture and, therefore, the intact hymen will not certify physical virginity. This should be reflected in the expert opinion. In such cases, ruptures of the hymen occur only during childbirth, when the continuity of the base of the hymen is disrupted and an irregular form of formation - myrtle papillae - remains in its place in the future.

Fresh tears and tears of the hymen bleed, their edges are swollen, soaked in blood. In the next day or two, small fibrinous overlays appear on the edges, and then granulation tissue forms, the edges are scarred. The scars are very delicate, whitish-pink, almost indistinguishable in appearance from the rest of the hymen.

The specified dynamics of the healing of the edges of the hymen ruptures is observed for 7-10-12 days, sometimes a little longer (depending on the thickness, i.e., the fleshiness of the hymen, the depth of the rupture, infection of the wound surfaces, and other factors.) This



dynamics forms the basis for judgments about the age of the rupture, which, thus, can be established only within the time frame for the healing of the edges.

Tears with completely healed margins are referred to as "old" or "old". There are currently no expert criteria for determining the timing of their occurrence.

Tears of the hymen, and more often tears that do not reach the base, often have to be differentiated with natural notches. Sometimes this can be done by visual examination, when the rounded bottom of the notch is clearly distinguished (in tears it is acute-angled) and scar tissue along the edges of tears and tears. Taken into account is such a feature as the symmetry of the notches, their location in any part of the hymen (tears and tears, as noted above, are localized mainly in the posterior-lower quadrant).

For the purpose of differential diagnosis, some special methods are also recommended.

So, A.N. Ratnevsky and N.A. Budyko (1969) propose to inspect the hymen when illuminated with ultraviolet rays. Due to the large number of superficially located collagen fibers, scars luminesce more strongly than the surrounding hymen tissue. According to the observations of the authors, in the breaks 3-5-6 days old, a characteristic weak-bluish glow is already noted, which is absent in natural grooves. B. Beri (1974) indicates that reliable results can be obtained during colposcopy under green monochromatic illumination. The author recommends studying the state of the capillary network of the hymen while increasing.

Expertise methodology. When deciding on the sexual inviolability of a testified, previously not sexually active, the expert establishes the fact of the integrity of the hymen, and if it is violated, if possible, the prescription of the latter.

Note: The approximate time for the healing of an effective hymen (depending on its properties): for a low, thin hymen, it is 6-9 days, for a high, fleshy one - 10-14 days; in case of repeated trauma to the hymen, infection, etc., healing can take up to 18-20 days. At a later date, it is usually not possible to determine the duration of the violation of the hymen, which is indicated in the conclusion.

With regard to the hymen, it is necessary to describe: its location, shape, height (width), thickness, consistency, nature of the free edge, size (diameter) and shape of the hole, extensibility, number of holes, the presence of septa, the presence of natural grooves, the presence of a contraction ring.

If damage to the hymen is found, describe their number, localization, shape and nature of the edges of the breaks (bleeding, granulating, scarring, healed), the depth of the breaks (reaches half the height (width) of the hymen, to its base, etc.), the color of their surface, the density of the edges of the breaks, the presence of hemorrhages in the thickness of the hymen.

To accurately indicate the location of breaks and other damages, as well as natural grooves, it is customary to conventionally mark their location in relation to a circle divided into 12 equal parts (by analogy with a watch dial).

If the hymen is intact, it is noted whether it has a structure that allows sexual intercourse without violating it (extensible, low - in the form of a border or roller, etc.), the size (diameter) of the hole and the nature of the edges are established, and the presence of or the absence of a cut ring.

In addition to examining the hymen, attention should be paid to the condition of the labia majora and small labia, the clitoris, the external opening of the urethra, the condition of the frenulum and scaphoid fossa, the depth and width of the vaginal opening, the nature of the

vaginal mucosa, the presence or absence of inflammation and other painful conditions , the nature of the discharge from the genitals.

If it is necessary to establish the possible presence of sperm, the contents of the vagina and the external os of the cervix, taken with the observance of precautions in order to avoid violating the integrity of the intact hymen, is sent to the forensic biological laboratory.

The injuries present are also described in detail. In the conclusion, indicate the prescription of the damage, the mechanism of occurrence, the qualification of their severity.

Establishment of signs that characterize the commission of sexual intercourse (examination of rape). Indisputable evidence of former sexual intercourse is the presence of sperm in a woman's vaginal mucus. They persist for 3-5 days after copulation (unless, of course, special measures were taken to destroy them). To detect spermatozoa at the time of examination, the contents of the vagina (mainly from the posterior and lateral fornices) are transferred with a sterile gauze swab onto defatted glass slides, which are dried in air.

Proceeding from the fact that the semen of a man (as well as other secrets and excretions) contains the same antigens of the ABO isoserological system as in the blood, that is, they coincide by group, to prove sexual intercourse with a particular man, it is very important to establish group affiliation of sperm in a woman's vagina (as well as in spots on her clothes and body, see below). For this purpose, the contents of the vagina are examined on a gauze swab used to obtain smears on glass slides.

Note: In perverted forms of sexual intercourse and sodomy, sperm can be found in the rectum (when intercourse through the anus) or in the contents of the mouth (when intercourse through the mouth).

Evaluation of the results of determining the group belonging of sperm is made taking into account the fact of "secretion", that is, the content of group-specific antigens in the blood in semen, saliva and other secretions of a person. The "highlighters", to which the majority of people belong, this content is significant, the "non-highlighters" - very little or they are not found at all.

To determine "secretion", saliva is examined, samples of which, like blood samples, are taken from victims and suspects.

Note: In cases of violent death associated with sexual crimes, it becomes necessary to posthumously establish the category of allocation. For this purpose, it is recommended to examine bile and urine from a corpse (TM Masis, 1971).

An indirect sign of former sexual intercourse P.A. Kuznetsov (1975) considers the fact of the detection of textile fibers from the materials of underwear, the suspect and hair from his pubis in the vaginal mucus of the victim. The author writes that although fibers and hair can get into a woman's vagina with any mechanical action, they are more often brought there during sexual intercourse. In this regard, a comparative microscopic examination of hair and fibers found in vaginal mucus with corresponding samples is recommended.

A reliable sign of former sexual intercourse is developing pregnancy, indirectly - the fact of infection with a venereal disease (it is required to exclude the possibility of non-sex infection).

Often, a fresh rupture of the hymen and mechanical damage in the genital area are considered signs of former sexual intercourse. Both of these features are purely indicative. It was noted above that defloration can be the result of lecherous actions, manipulation of a man's hands, or some object; as for mechanical injuries, they are often inflicted when attempting to

rape, when, as a result of the resistance of the victim, the ensuing physical weakness of the man, or for other reasons, sexual intercourse is not performed.

With systematic sexual intercourse through the anus in the area of the latter, rather characteristic changes can develop, namely: funnel-shaped retraction, gaping of the opening, flattening of the folds of the skin and rectal mucosa, expansion of its ampullar part, relaxation of the sphincters. When an expert assessment of these changes, it is necessary, however, to take into account that they may be the result of the influence of other factors, namely, painful processes in the corresponding area, senile atrophy, and also represent congenital anatomical features.

Vaginal cells trapped under the foreskin of the penis during sexual intercourse are lysated within 2-3 days, but on the body of the penis they retain their properties and, therefore, can be detected up to 5 days (if there was no proper toilet of the genitals) ... In stains on clothing materials, vaginal cells, like other cells of animal origin, can be found long after the incident, calculated for many months, and sometimes years, if the objects were in conditions that prevent putrefactive decomposition of cells. In the subungual contents, vaginal and other cells, as well as blood, textile fibers also persist for quite a long time and are sometimes detected even after repeated hand washing.

When examining the detected cells, their vaginal origin, group affiliation, as well as the degree of estrogenic stimulation and the phase of the menstrual cycle of the woman's body, from which they originated, are established.

Of no small importance are the other material traces listed above, noted on the genitals and in the subungual contents of the suspect.

So, in the study of blood, its species, group and sex can be established; in the study of hair - their species and regional origin, group affiliation, cytological sex (while maintaining the root end with vaginal membranes), similarity with specific samples; in the study of textile fibers - coincidence in the studied characteristics with samples of fibers from the clothing materials of the injured person.

The observed similarity in morphological, cytochemical and group-specific properties of hair, vaginal contents, blood and textile fibers found on the genitals, under the nails and on the clothes of the suspect, with the corresponding objects seized from the injured woman as samples, is taken into account when judging about possible sexual intercourse with this woman.

If a pregnant woman has undergone rape, it becomes important to diagnose the fact of sexual intercourse with a woman who is in a state of pregnancy, since this significantly limits the circle of persons with whom the suspect could have sexual intercourse. For this purpose P.E. Shikov and N.G. Shalaev (1975) propose to conduct a study to identify a specific pregnancy hormone - choriongonadotropin in the vaginal contents, on the male genitals and in spots on his clothes.

According to the authors' observations, in dried spots on gauze, choriongonadotropin can be detected for 1-3 months.

In order to prove the perverted forms of sexual intercourse and sodomy, on the genitals of the suspect, it is important to find elements of feces, worm eggs, cells of the rectal mucosa, intestinal flora (during sexual intercourse through the anus) or elements of saliva, microflora of the oral cavity (during sexual intercourse through the mouth).

Emphasizing the evidentiary value of material traces detected in suspects of sexual crimes, it should be noted that failure to detect them does not exclude natural or perverted

sexual intercourse, the traces of which can be removed or disappeared over time (with a late examination).

*Expertise methodology. The duties of a forensic expert during this examination include the identification of objective data indicating a previous sexual intercourse, as well as the establishment of injuries on the body (in particular, on the genitals, on the thighs, etc.), characterizing the commission of sexual intercourse or an attempt to him.*

*During the examination of forced sexual intercourse or an attempt to it, the following is established: the integrity or violation of the hymen and the duration of the violation (if possible), the location of the breaks, their number and nature of the state of the edges of the breaks and the color of their surface, the density of the edges.*

*When establishing the violation of the integrity of the hymen and its prescription, the possible mechanism for the formation of the detected damage is also determined, for example, their infliction by a tense penis, a finger or some other blunt object; piercing-cutting, object, etc.*

*In case of fresh damage to the hymen, examination of the uterus and appendages through the vagina is not allowed, it can be performed only after the healing of the hymen, no earlier than 10-12 days after the sexual intercourse, and, in order to avoid causing additional damage to the hymen, the examination should be carried out, with the help of Cuzco's small mirror and careful two-handed examination.*

When the integrity of the hymen is not violated in the examined person, they find out the possibility of having sexual intercourse without damaging it (structural features of the hymen and its extensibility), note the size (diameter) of the holes, the nature of the edge, the presence or absence of a ring of contraction. In conclusion, in these cases, it is indicated that the structure of the effective hymen allows for sexual intercourse without violating its integrity.

In cases where sexual intercourse was not accompanied by a violation of the integrity of the hymen, the study of the internal genital organs to establish the state of the uterus and appendages, the presence of pregnancy, etc. is performed not through the vagina, but through the rectum.

In women who are sexually active, the presence of genital injuries and other bodily injuries that characterize forced sexual intercourse is established, and the general condition of the genitals is also determined. The examination is carried out using a Cuzco mirror and a two-handed examination of the internal genital organs.

The contents of the vagina and the external os of the cervix are sent to the forensic biological laboratory to determine the presence of sperm and the group belonging of sperm.

If it is required to determine the presence of sperm and the group belonging of sperm, the contents of the vagina are taken on a sterile gauze swab, fixed on a wooden rod or on tweezers, wiping the walls of the vagina with it, especially the posterior and lateral fornices. If the swab is immediately sent to the forensic laboratory for examination, it is placed in a test tube, the hole is sealed with a stopper and the appropriate inscription is made.

If the tampon is examined only after a certain period of time, the gauze is removed from the rod and dried at room temperature without access to direct sunlight, and then packed, inscribed and sent to the laboratory. In both cases, a clean gauze sample (from the same piece as the swab was made) is attached for control.

When conducting an examination of rape, in cases where it becomes necessary, it is also necessary to examine the anus of the witness. Inspection is carried out on a rigid couch with the

knee-elbow position being examined. The buttocks are spread out with their hands so that the rectal mucosa is visible. Pay attention to fresh damage in the anal area and on the rectal mucosa in the form of bruises, abrasions, cracks or wounds. Having found such damage, they are described with an indication of the nature, shape and location.

Pay attention to the possible presence of scars, the shape of the anus (in the form of a small depression, a wide or retracted funnel, etc.), the severity of radiant skin folds around the anus, the presence of gaping; determine the tone of the sphincters (by introducing a finger smeared with petroleum jelly into the rectum). Particular attention is paid to the presence of rectal gonorrhoea.

With systematic sexual intercourse through the anus, the following characteristic changes occur in the anus and rectum: funnel-shaped retraction, gaping of the anus, flattening of folds in the area of the anus and rectal mucosa, purple-red color of the mucous membrane with a bluish tinge, relaxation of the sphincters, flabbiness and lethargy of the rectal mucosa, expansion of the ampullar part of the rectum, prolapse of the rectal mucosa layers, etc.

It should be borne in mind that the area of the anus can normally have the form of a narrow or wide funnel, which in such cases is formed by the mucous membrane. If the funnel-shaped retraction occurred as a result of systematic intercourse through the anus, then the wall of the funnel consists of the skin and mucous membrane of the anus. It must also be remembered that many of the listed signs may appear as a result of intestinal disorders, including constipation, diarrhea.

Note: If you need to make a study using a rectoscope, the examined person is sent to an institution where there is a specialist who knows this method of research.

In recent cases, when the victim after intercourse through the anus did not have an act of defecation, it is necessary to take swabs from the rectum to identify sperm. Between the jaws of the surgical tweezers, the edge of a piece of cotton is clamped, the rest of the cotton is wrapped several times around the end of the forceps. The tampon is inserted into the rectum to a depth of 3-5 cm and the rectal mucosa is wiped with a circular motion. The removed swab is dried and sent to the forensic biological laboratory.

*Establishing signs that characterize the commission of lecherous acts. The result of lecherous actions can be mechanical damage. Manipulation, for example, with hands or a penis in the genital area of a girl often entails irritation with swelling, hyperemia, and suppuration (in case of infection). With systematic lecherous actions, chronic inflammation of the mucous membrane can develop.*

*The manifestation of lecherous actions is of a varied nature. Signs of lecherous actions are: redness of the mucous membrane of the external genital organs, tears and ruptures of the hymen; hemorrhages in the thickness, along the edge or at the base of it; cracks, tears, abrasions and hemorrhages on the mucous membrane of the external genital organs, in particular, in the area of the labia minora, clitoris, external opening of the urethra; various injuries in the area of the pubis, perineum, anus, etc.*

*Note: If during the examination only redness of the mucous membrane of the external genital organs is found, then it is necessary to examine the examined one again after 3-5 days. Redness resulting from a single commission of lecherous actions, and not from untidy content, helminthic invasion, etc., should disappear during this period.*

*It is necessary to pay special attention to the condition of the scaphoid fossa and posterior adhesions, since with systematic lecherous actions these areas are subjected to*

*mechanical stress (pressure), as a result of which: gaping of the genital fissure, funnel-shaped depression in the perineal region, skin atrophy in the perineal region, posterior commissure and scaphoid fossa. All these signs must be taken into account in aggregate, since some of them can be observed outside of connection with lecherous actions.*

*Of great evidentiary value in this examination is the detection of sperm on the genitals, in their circumference, as well as on the body of the witness or her clothes.*

In these cases, it is necessary to send to the forensic laboratory not only the contents of the vagina (or the vestibule of the vagina), but also traces of dried liquid suspicious for semen from other parts of the body being witnessed.

To exclude infection with sexually transmitted diseases, the person being examined is sent to a dermatovenerologic dispensary. The discovery of these diseases in the examination of lecherous acts can have a certain value, although one should not lose sight of the possibility of non-sexual infection.

Establishing the ability to copulate and conceive. This examination is carried out in cases of divorce, in cases when a woman, incapable of conceiving, impersonates the mother of someone else's child, as well as when determining the severity of bodily harm, when the question of loss of productive capacity arises.

When deciding on the ability to copulate, the expert must find out if there are defects in the development of the genital organs (short vagina, its aplasia or atresia, congenital or acquired narrowings, tumors, etc.) or vaginismus.

When establishing the ability to conceive, one should take into account the age of the witness, anatomical and physiological features; the presence of gynecological diseases (endometritis, tumors, abnormal position of the uterus, etc.), hormonal disorders, chronic infections and intoxication, radiation exposure, etc.

In difficult cases, the person being examined is sent for a stationary examination.

If the examination is carried out in a divorce case, it is necessary to examine the husband of the examined woman in order to establish his sexual ability.

Establishment of pregnancy and previous childbirth. In a forensic obstetric-gynecological examination regarding the presence of pregnancy and its duration, determining the former childbirth or the postpartum period, establish:

1. presence of pregnancy and its duration;
2. the prescription of the previous birth or miscarriage;
3. the presence or absence of deviations from the normal course of pregnancy, the postpartum period;
4. the presence of diseases (including diseases of the genital organs) that can cause termination of pregnancy.

When questioning the witness, they find out and fix in the expert's conclusion the date of the first day of the last former and the first expected, but not coming menstruation; with a recent onset of sexual activity - the date of first sexual intercourse.

When deciding on the present and past pregnancies, an examination and description of the mammary glands, abdomen, external and internal genital organs, perineum is performed.

When examining the external genital organs, the state of the genital fissure (closed, gaping), the perineum (presence or absence of ruptures, their age, degree, etc.), the presence or absence of a "fossa of motherhood" (sign of Snegirev-Gubarev), the state of the mucous membrane of the external genitals (color, swelling, damage), frenulum of the lips, posterior

adhesion of the lips, hymen (whether its continuity is preserved at the base or does it look like warty fleshy eminences - "myrtle-like papillae"); the state of the entrance to the vagina (narrow, capable of contraction, wide, gaping); absence or presence of discharge (nature, quantity).

With an internal (vaginal) examination, it is established:

1. the condition of the vagina and its walls (narrow with pronounced folds, wide with smooth walls, etc.);
2. condition of the cervix - shape, size, density, presence or absence of erosion, shape and condition of the external pharynx (round, slit-like, closed, gaping);
3. the state of the body of the uterus: position (anteflexio-versio, anteflexio or hyperanteflexio, retro-versioflexio); surface (smooth, bumpy); magnitude; consistency (dense, doughy, soft); mobility, sensitivity;
4. the condition of the appendages;
5. the presence and nature of the discharge.

In the presence of pregnancy, its term is determined, and it is also established whether it is primary or repeated.

In doubtful cases or at an early stage of pregnancy, the forensic medical expert sends the examined person to obstetric and gynecological medical institutions.

In the later stages of pregnancy (second half), it is necessary:

1. measure the size of the pelvis (with a pelvis meter) and the distance from the pubis to the navel, from the pubis to the fundus of the uterus, from the pubis to the xiphoid process, as well as the circumference of the abdomen at the level of the navel (with a measuring tape);
2. establish the following information about the fetus: position (longitudinal, transverse, oblique); the presenting part (head, buttocks); standing height of the presenting part above the entrance (high, low); her mobility (running, mobile, pressed, inserted); the density of the presenting part;
3. to determine the presence of uterine murmur, fetal movement;
4. fetal heartbeat (audible clearly, dull; rhythm, number of beats per minute, not audible); mark the place where the heartbeat is most clearly heard.

During childbirth that took place in medical institutions, the forensic medical expert establishes the prescription of the birth according to medical documents: the history of childbirth, the history of the development of the newborn.

In case of out-of-hospital births, an opinion can be given on the state of the birth canal only within two to three weeks from the time of delivery; after this period, establishing the prescription of labor presents great difficulties, especially in multiparous (they may not have fresh ruptures of the cervix and in the perineum, and the uterus may contract slowly due to infection).

When determining the duration of pregnancy, the medical examiner should strive to establish:

1. the date of the first sexual intercourse - with the recent onset of sexual activity;
2. the date of the first day of the last previous and first expected, but not coming menstruation, and the whole cycle is calculated in days;
3. the date of ovulation and the possible optimal time of conception;
4. date of the first fetal movements,
5. date of delivery.

The normal duration of a human pregnancy is usually 280 days (40 weeks, 10 lunar or 9 calendar months).

When judging a past or existing pregnancy and its duration, as well as the prescription of childbirth, the discharge of the mammary glands should be sent to the study to determine its morphological composition (the presence of colostrum cells, fat globules, leukocytes, etc.). The secretion of the mammary glands is obtained by gentle pressure on the mammary glands and areola; smears are made from the released contents on glass slides. After the smears have dried, the glasses are packed, inscribed and sent for cytological examination to a forensic biological laboratory.

Establishing a link between termination of pregnancy and trauma. When conducting an examination to establish a connection between an abortion and an injury, a forensic expert must collect an anamnesis from the words of the witness, examine her, examine the original medical documents from the antenatal clinic, medical and obstetric institutions, where the testified person applied before this pregnancy and during pregnancy, before and after injury.

From the survey of the witnessed and the submitted medical documents, the expert must find out:

1. when, what and on what parts of the body the blows were inflicted, did the examined person fall and what parts of the body hit during the fall (abruptly sat on the buttocks, fell on the stomach, etc.);

2. after what period of time (specify in days and hours) the symptoms of a threatening miscarriage or premature birth appeared and how they were expressed (aching pain in the lower back and lower abdomen, cramping pains, the appearance of discharge from the genitals in the form of a colorless or sacral fluid, liquid blood, clots, etc.);

3. when and where the fruit came out, what length, weight;

4. whether the previously examined pregnancy had, how many, how they proceeded and how they ended (urgent birth, artificial abortion, spontaneous miscarriage, in the latter case - at what month of pregnancy);

5. whether the person witnessed before this pregnancy and during pregnancy suffered from infectious diseases, diseases of the endocrine system, inflammatory processes in the genitals or other female diseases (underdevelopment, abnormal position of the uterus, ovarian cyst, fibroma, etc.);

6. how the real pregnancy proceeded, whether the testified person went to the antenatal clinic, whether she was in the hospital before the injury in order to preserve the pregnancy;

7. results of laboratory tests (determination of Rh affiliation, identification of infectious diseases of the genital organs).

After questioning the witness, the expert makes a detailed forensic medical examination, describes the injuries on the body, indicating their nature and location (the absence of injuries should also be reflected).

During a gynecological examination, special attention should be paid to the size, position, mobility of the uterus, finding out the presence or absence of adhesions in the peri-uterine tissue, tumors in the uterus or appendages, inflammatory changes in the genitals.

When drawing up a conclusion, it must be borne in mind that the reason for the termination of pregnancy may be underdevelopment of the uterus, inflammatory diseases of the uterus and appendages, habitual miscarriage (due to numerous previous abortions, infectious, endocrine diseases, rhesus conflict, toxoplasmosis, etc.) ...



Termination of pregnancy in the first half of it in healthy women from trauma is almost impossible (especially up to 10 weeks, when the uterus is in the pelvic cavity and is reliably protected from external mechanical influences). The possibility of termination of pregnancy from significant trauma in the second half of pregnancy is more likely, when from compression of the abdomen, a strong blow to the abdomen or genital area, from a sharp fall on the buttocks, rupture of the fetal bladder or placental abruption is possible, followed by early termination of pregnancy.

If a rupture of the fetal bladder or placental abruption with discharge of amniotic fluid or uterine bleeding occurs immediately or shortly after an injury in a woman with an uncomplicated obstetric history (healthy woman), the expert has reason to establish a direct link between the injury and the termination of pregnancy.

When determining the severity of bodily harm caused to a pregnant woman, the presence or absence of a violation of pregnancy should be taken into account:

1. if there was a miscarriage or premature birth, then the damage is assessed as serious;
2. if there were objective symptoms of threatening miscarriage (spotting, uterine excitability) that appeared soon after the injury, but due to timely hospitalization, the pregnancy was preserved, the assessment of the severity of the injury depends on the duration of treatment;
3. in the absence of objective signs of a threatening miscarriage, the expert evaluates only the severity of the bodily injuries themselves.

*Establishment of artificial termination of pregnancy (examination of illegal abortion). The forensic medical expert in such cases establishes:*

1. *Was the witness pregnant?*
2. *Did she have an abortion?*
3. *At what stage of pregnancy did the abortion take place?*
4. *was the abortion spontaneous or induced?*
5. *How much time has passed since the abortion was performed?*
6. *How was the abortion performed?*
7. *What harm did the abortion cause to the person being surveyed?*
8. *was the abortion performed by the witness or by an unauthorized person?*
9. *Could the abortion have occurred under the circumstances specified by the interviewee?*

*When deciding on the causes of abortion (artificial, spontaneous), the following anamnestic data are taken into account:*

1. *Diseases suffered by the examined person in the past and shortly before the abortion began (in particular, venereal);*
2. *the number of pregnancies, their course and outcome;*
3. *the circumstances and time of the onset of the abortion.*

If the interviewee has applied for an abortion in medical institutions, the medical examiner must examine the medical records. To exclude spontaneous abortion due to toxoplasmosis or Rh conflict, the necessary laboratory tests should be carried out in appropriate medical institutions.

In the process of examination, an obstetric-gynecological examination is carried out with a description of the condition of the external genital organs, injuries in the vagina, cervix and

cervical canal (burns, abrasions, tears, traces of the imposition of bullet forceps), traces of lubrication with various substances, etc.

All detected damage is described in detail, indicating their location, size, shape, color, etc.

If, during the examination, traces of any extraneous liquids (soap solution, iodine tincture, potassium permanganate solution, etc.) are found in the genitals, the expert must take this liquid on a tampon and, after drying, send it to the forensic chemical laboratory.

*Establishing gender. Forensic medical examination to establish gender is carried out only by an expert commission with the participation of a forensic medical expert, obstetrician-gynecologist, endocrinologist, urologist and psychiatrist. This examination is appointed in cases of erroneous determination of gender at birth, in divorce cases, in cases of sexual crimes, sexual perversions, insults, etc.*

*When determining gender, you need to find out the following:*

*1. the general development of the subject (physique, skeletal structure, shape and size of the pelvis);*

*2. development and features of the external and internal genital organs;*

*3. development and severity of secondary sexual characteristics, including the nature and characteristics of hair growth on the head, face and genitals; development of the larynx; timbre of voice;*

*4. the presence and nature of sexual desire;*

*5. mental development;*

*6. the presence and nature of discharge from the genitals (seminal fluid, menstrual flow).*

In cases where a stationary endocrinological examination is necessary to resolve the issue, the person being examined is sent to the appropriate medical institution.

## LITERATURE

### MAIN LITERATURE

1. Forensic medicine: textbook / under total. ed. V. N. Kryukova. - 2nd ed., Rev. and add. - Moscow: Norma: INFRA-M, 2015 .-- 431 p. : tab., cx., ph.

### ADDITIONAL LITERATURE

1. Meter, V.N. manual for stud. 4 and 5 courses of all fac. honey. universities, trainee doctors, honey. forensic experts / V. N. Meter; V. N. Meter; UO "GomGMU", Dept. pathological anatomy. - Gomel: GomGMU, 2016 .-- 20 p. Objects of research of biological origin in the system of investigative actions [Electronic resource] / E. A. Bazikyan, V. V. Kuchin, P. O. Romodanovskiy, E. Kh. Barinov - M.: GEOTAR-Media, 2014. - 104 p. ... - Access mode: <http://www.rosmedlib.ru/book/ISBN9785970428825.html>. - Date of access: 22.05.2017. Forensic medicine and forensic medical examination [Electronic resource] / ed. Yu.I. Pigolkina - M.: GEOTAR-Media, 2014 .-- 728 p. : ill. - Access mode: <http://www.rosmedlib.ru/book/ISBN9785970428207.html>. - Date of access: 22.05.2017.
3. Shpak, V. V. Forensic examination of material evidence of biological origin: textbook. Method. manual for 5th year students of all fac. honey. universities, trainee forensic physicians / V.V.Shpak; UO "GomGMU", Dept. pathological anatomy. - Gomel: GomGMU, 2017. - 31 p. : ill.
4. Shpak, V. V. Forensic examination of transport injury: textbook. Method. manual for students 4 and 5 courses of all fac. honey. universities, trainees of forensic medical. / V.V.Shpak; UO "GomGMU", Dept. pathological anatomy with a course of forensic medicine. - Gomel: GomGMU, 2015 .-- 35 p. : ill., ph.

### ELECTRONIC DATABASES

1. Physician consultant. Electronic Medical Library = Consultant of the doctor. Electronic medical library [Electronic resource] / Publishing group "GEOTAR-Media", LLC "IPUZ". - Access mode: <http://www.rosmedlib.ru/>. - Date of access: 09.11.2017.
2. Student advisor. Electronic library of a medical university = Student consultant. Electronic library of medical high school [Electronic resource] / Publishing group "GEOTAR-Media", LLC "IPUZ". - Access mode: <http://www.studmedlib.ru/>. - Access date: 09/05/2017
3. Scientific electronic library eLIBRARY.RU = Scientific electronic library eLIBRARY.RU [Electronic resource]. - Access mode: <https://elibrary.ru/>. - Date of access: 09.05.2017.
4. Oxford Medicine Online [Electronic resource] / Oxford University Press. - Access mode: [www.oxfordmedicine.com](http://www.oxfordmedicine.com). - Date of access: 05/09/2017.
5. Springer Link [Electronic resource] / Springer International Publishing AG. - Access mode: <https://link.springer.com>. - Date of access: 05/09/2017.