



2011-2012

INTRODUCTION TO CLINICAL PRACTICES



GAZİ UNIVERSITY FACULTY OF MEDICINE

PREFACE

The aim of our faculty of medicine is to train physicians of international standards, who would overcome the health problems of the country, investigate and question, are reluctant to follow and practice current advances in medicine, have healthy and affective communication skills in every field of his/her career, could work as a physician and a leader in various hospitals that he/she is assigned, and are sensitive to the problems of public. Such an aim encumbers our students to be good physicians and forces them to be trained better.

Our faculty has demonstrated its being at the top of the medical education by taking place among the first eight faculties that accredited their Pregraduate Medical Education. It is obvious that continuous evaluation and self-renewal are one of the most important steps of medical education. Therefore, it is of great importance to provide our students introduce to the clinic earlier in order to be good physicians.

Practicing "Introduction to Clinic" has been started in 2011-2012 Academic year. This would make us to achieve our aim faster. Our students that engage with the hospital and patients from the third class would be self-confident in the future and would be able to integrate their basic medical and clinical knowledge. The content of this book has been formed in the way to provide the students be readily prepared when they begin clinical practice, as well as to obtain maximum efficiency from the clinical education.

Our students would learn the basic practices as a standard via this book prepared for these practices by my valuable colleagues. They would feel themselves much more confident when graduated. Therefore, I thank to all my colleagues for their contribution in preparing this book and wish the continuity of their studies.

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ANNUAL PROGRAM FOR INTRODUCTION TO CLINICAL PRACTICES

INTRODUCTION TO CLINIC	RESPONSIBLE Department
ANAMNESIS-ADULT	CLASS
ANAMNESIS-PEDIATRIC	CLASS
Visual	Ophthalmology
Head and Neck 1	ENT (Otorhinolaryngology)
Head and Neck 2	Internal Medicine; Endocrinology
Breast 1	General Surgery (Breast Group)
Breast 2	Internal Medicine; Oncology
Respiratory 1	Chest Disease
Respiratory 2	Thoracic Surgery
Cardio-vascular 1	Cardiology
Cardio-vascular 2	CVS
GIS 1	Internal Medicine; Gastroenterology
GIS 2	General Surgery (GIS Group)
Female genital	Gynecology and Obstetrics
Male genital	Urology
Urinary	Internal Medicine; Nephrology
Musculoskeletal 1	FMR
Musculoskeletal 2	Internal Medicine; Rheumatology
Musculoskeletal 3	Orthopedics
Lymphatic system	Internal Medicine; Hematology
Neurologic 1	Neurology
Neurologic 2	Neurosurgery
Skin	Dermatology
Pregnancy	Gynecology and Obstetrics
Pediatric Examination 1 (Newborn-Infant)	Pediatrics
Pediatric Examination 2	Pediatrics
Pediatric Examination 3	Pediatrics
Pediatric Examination 4	Pediatrics
Pediatric Examination 5	Pediatrics
Pediatric Examination 6	Pediatric Surgery
Mental 1	Psychiatry
Mental 2	Pediatric Psychiatry
COMPENSATION WEEK	Overall Departments
COMPENSATION WEEK	Overall Departments
EXAM	Related Lecturers

STUDENT CONTINUITY CHART

Student's Name - Surname:.....

Number:..... Group Number:.....

WEEK	DEPARTMENT	LECTURER'S SIGN
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GUIDE FOR PATIENT INTERVIEWING SKILLS

A- Welcoming – Meeting and Initiating the Interview

- 1. Designing physical medium for the interview**

Before the interview, eliminate the factors that are likely to hinder or make difficult the interview. During the interview, direct all your attention to the patient. Do not deal with anything during that period (For example, do not speak with cell phone, do not deal with anybody, etc).

2. Appropriately welcoming the patient

It is of great importance to greet the patient and say "hello" before initiating the interview. Use gesture and facial expression while greeting (For example, you can shake hands making eye contact and smiling). Welcome the patient standing up from your chair; it is a sign of respect.

3. Introducing yourself, specifying content of the interview, defining your task

Such as;

"Hi, I am Dr. Ayşe Coşkun, I am here to make an interview at the request of your surgeon"

"Hi, I am Dr Deniz Gök, the physician in the polyclinic, how can I help you?"

"Hi, I am intern Dr. Ali Gezen, I want to make an interview with you and examine you".

4. Showing interest and respect to the patient and creating a comfortable medium

Take the patient to the place where he/she could feel himself/herself comfortable. Close the door showing that you provide the required privacy. Create a silent medium. Show the patient a place to sit down. You may say "Welcome, you may sit down on this chair".

5. Asking the name of the patient and calling him/her with name

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Learn the patient's name and call him/her with name in the course of the interview. While calling, prefer using "Mrs. Ayşe" or "Mr. Ali".

6. Questioning identity

Obtain information about the career, family, and sociocultural status of the patient. Take the address and phone number for further contact. Such information makes you know your patient better.

B- Specifying the reason for the interview – Data collection

a- Nonverbal skills

7. Using body language and observing the patient's body language

Nonverbal communication is one of the most important components of good patient communication. Our body language (glance, facial expression, voice tone, and posture) gives clues about our attention to the patient. Make eye contact with the patient while speaking and pay attention to your facial expression to be in favorable manner. Speak with such a tone that he/she could hear you. Pay attention to be in equal line of vision while speaking (interviewing at the same eye level; sitting if the patient is sitting, etc). Eliminate the obstacles between you and the patient particularly during long and difficult interviews (for example, moving from your desk and sitting close to the patient). Moreover, thoughts, anxiety and expectations of your patient are reflected on her/his body language. Observe your patient's body language and pay attention to the condition you feel.

8. listening to the patient without interrupting

Allow the patient speak. Do not interrupt. If you want to ask something, wait for the patient to complete his/her speech. You may take notes not to forget your questions. Silence from time to time is usual in the course of the interview. During his/her speech, you may use an encouraging body language (you may make a gesture with your head or hand indicating that you re listening or you confirm) and motivating words (for example, yes I understood eeee..... then.....else..... go on....)

b- Verbal skills

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9. Learning the reasons for presentation

Begin with open-ended questions that would make the patient to say his/her complaints comfortably; such as "What is your complaint?" "Which problem brought you here?" "How can I help you?"

10. Listening the details of the reasons for presentation

You may continue with open-ended questions to learn the details of the patient's presentation; such as ".....you have said that the problem was Can you please give more detailed information about this subject?". Allow the expression be more detailed saying that; "you have told that you had headache. Is there anything that you like to add?"

If the patient is directed to an extremely detailed expression far from the main subject, make him/her return to the primary symptom asking 'What else can you tell us about your complaint?' or "You have told about your abdominal pain just now, can you please explain it in detail?".

Closed-ended questions that are responded as "yes/no" limit the speech, interrupt the communication and make the communication simplex.

11. Encouraging the patient to tell his/her problem

Encourage the patient to tell more and to give details by shaking your hand and saying 'hi hi' or 'go on, I am listening' when he/she pauses. Sometimes, directing the last sentence or word of the patient as a question makes the patient to remember and get up the information and enables obtaining more information.

12. Taking notes without interrupting the speech

Taking notes may not be required during every interview. Take notes about certain points and critical information without interrupting the interview and eye contact.

13. Using an understandable language

Pay attention not to use medical words and terms. Asking 'Can you show the place of pain?' instead of 'Can you show the localization of the pain?' would be more understandable. Avoid using complex and long sentences that the patient could not understand. Use a simple and understandable language.

14. Summarizing obtained information and allowing the patient make additional explanation, if any
Summarize the overall speech in order to allow the patient to confirm and to remember those he/she have forgotten, if any. You may use the question "Is there anything else that bothers you?" to remind the forgotten issues. Be sure that the patient has told everything.

C- Understanding the point of view of the patient and responding to his/her emotions

15. Learning the point of view of the patient

Ask questions directed to the patient's way of perceiving the problem, influencing by the problem, expectations, and thoughts. You may ask, "How did this problem affect/may affect you and your family's life? Did it change/is it likely to make a change in your working/daily life?"

16. Understanding the patient's current situation and responding via body language

Be cool while listening to your patient and continue eye contact, lean your head and body forward and towards to the patient, sit in a comfortable manner keeping your arms and legs free. Your patient will realize that you are listening to him/her with patience and will be sure that you would find a solution to his/her problem.

17. Empathizing

a- Putting yourself in the patient's place

During the interview, it is important for the physician to put him/herself in the place of the patient. Respond to the question "What would be my feelings, thoughts and reactions if I experienced the same things?", and try to understand the reason of the patient's current feeling. Empathize with him/her. Thus, the patient feels that his/her feelings are understood and approved.

b- Responding to the patient's feelings and reactions

Try to be cool, steady, prudential and objective against the reactions of the patient. Approve overall feelings of the patient. For this purpose, reflect the feelings with simple words as soon as the patient displays his/her feelings. Do not be judgmental. For example, you may say, "I can see this is distressing for you".

Do not exaggerate the deepness and extend of the patient's feelings in order not the patient feel guilty. Say, "You seem a bit distressful because of this" instead of saying "I see that this has made you quite angry". For the patient to feel his/her feelings are understood and approved, say that his/her feelings are reasonable and sensible. For example, you may say, "it is normal to be sad in this situation. Anyone would feel embarrassed" or "you give reactions that anyone would give". Give personal support. You may say, "I will help you in this issue".

D- Sharing the information and making plan

a- Informing the patient about his/her disease

18. Asking the patient what he/she thinks about his/her disease

Ask questions such as, "What do you think about your disease?" "What do you know about this disease?" Evaluating the Patient's foreknowledge about the disease gives opportunity to correct the misinformation on time. Further procedures and therapy are avoided from being damaged. Meanwhile, the patient would expose what he/she thinks and feels about the disease.

19. Giving appropriate and comprehensive information that meets the patient's needs

Tell the diagnosis in brief and in understandable manner. Respond to the patient's sensitivity concerning the diagnosis; "I am aware that the diagnosis made you anxious". Comprehensively discuss the diagnosis with the patient. At that time, pay attention speaking in a manner that the patient could understand. Share the information including solution options for the patient's problem clearly and comprehensively, and make the options understandable using verbal or visual materials.

20. Being sure that the patient has accurately and adequately understood the given information

Check what the patient has understood about his/her disease. It may be available to ask whether the patient has question about the information given. For example, ask open-ended questions as, "Would you like to ask anything about the subjects we have talked up to now? If required, you may deepen the explanations asking questions to be sure that the subject is completely understood.

b- Discussing therapy plan and allowing the patient's participation

21. Specifying the therapy plan and aims

Tell the therapy options clearly with short sentences and in simple words. Explain the goal of the treatment. Define your targets. Ask the patient's opinion about your solution options. Ask the patient's knowledge and beliefs about the therapy. Remove misunderstandings and lack of information.

22. Including the patient in decision processes and specifying the priorities of the patient

Encourage the patient to share his/her own suggestions and thoughts. Learn which of them are important for the patient and make additional explanation if required. Ask the patient whether there is a difficulty in applying the solution. Give time to the patient to make a decision.

23. Discussing the importance of the Patient's role for the solution and inviting the patient for collaboration

After determining how much the patient is reluctant to participate in decision process, explain his/her³ role for the solution. The patient has a substantial role in applying the decisions. Tell the patient clearly about his/her importance. For example, you may say, "Mrs. Ayşe, you have very important role in applying the decisions and in succeeding. Your positive and steady approach would make it easy to accomplish. At this point, is there anything that you like to say or discuss?"

24. Being sure that the solutions would be applied by the patient

In order to be sure that the solutions would be applied by the patient, ask the patient questions such as "I think that you will easily apply the decisions that we have made in the course of the interview, do you agree with me?"

25. Obtaining the patient's consent

Obtain verbal or written consent of the patient concerning the decided solution by asking such questions as, "if we repeat once more, is it available for you to apply the decision that we have made about.....?"

E- Finalizing the interview

26. Summarizing the decisions made with the patient

Summarize the decisions that you have made with the patient in the course of the interview. While summarizing, you may use the notes you have taken during the interview.

For example, you may summarize the decision to the patient, who applied for family planning counseling and decided to use intrauterine device, by saying, "Mrs. Ayşe, we have talked about some details concerning family planning methods during this interview. In the light of my information, you have decided that intrauterine device is the method suits you best. According to your information, no risky situation has been assessed concerning this issue....."

27. Explaining unexpected situations and the things to do in this case

Explain the patient things to do in case of unexpected situations and how he/she could contact with you or with the institute. Clearly explain what to do when he/she is unable to contact and explain as written, if required.

28. Learning whether the patient has any question to ask

The patient may have questions about the interview or the subjects explained. For this purpose, ask "Do you have any question else to ask?"

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29. Agreeing with the patient for further steps

It is important to agree with the patient for the next appointment in terms of winning his/her confidence and to accomplish your responsibility as a physician. Therefore, specify a time appropriate both for you and for the patient before ending the interview.

30. Finalizing the interview and sending off the patient politely

The interview can be finalized after all the applications have been completed. However, it is appropriate to send the patient as is in the greeting. Therefore, send the patient politely again using your body language. Use also verbal expressions such as "Good day Mrs. Ayşe"

F- Investigate the faithfulness (comply with the therapy) (Other interviews)

31. Investigating the roles

Express the problems in a neutral manner. Learn about the patient's experiences since the last visit. Assess whether he/she has complied with the recommendations or whether the decisions have been applied.

32. Revealing the problems without causing unexpected emotional reactions

Try to obtain information using open-ended questions. Avoid behaving in a manner that would make the patient feel shamed or humiliated. Do not be judgmental. Simply ask, "what do you think the problem is?"

33. Determining and improving lack of compliance with the therapy

If you determine that the patient have quitted therapy, be sure whether the recommended therapy is adequate and appropriate for achieving the goal. If the therapy is appropriate, consider whether the patient is compliant.

G-Motivating faithfulness (Motivate for compliance) (Other interviews)

34. Reacting against emotions and supporting the Patient's solution

Support the patient when he/she does not comply with the therapy. Prevent the patient to feel guilty. Express that you will approve the solution that he/she would offer or share. Express that you will support the patient concerning his/her own solution.

35. Discussing the solutions

First, ask the patient to offer a solution. Be sure that the solutions discussed are satisfying. Discuss the suggestions together. Review their availability (applicability). Ask the patient to confirm the solution decided. Effectively investigate the potential problems that likely to occur along with the new therapy plan.

EDUCATION PROGRAM ON TAKING MEDICAL HISTORY ABOUT SEXUAL FUNCTIONS

In the population, problems concerning sexual function are usually cannot be questioned by physicians, and patients as well cannot mention these problems on their own accord. Although patients that experience these problems are encountered more frequently in certain clinics (urology, gynecology and obstetrics, dermatology, internal medicine, cardiology, infectious diseases, psychiatry, etc.) as the condition is multidisciplinary, patients that are admitted to the primary health care clinics may also suffer these problems. All physicians should be fully equipped on this subject.

Why is taking sexual history and learning this skill important?

1. The prevalence of patients experiencing sexual problems is reported to be 50% or higher in various populations.
2. The physicians may consider sexuality as a taboo not only due to value judgments of the population but also to their education in the family or at school. As a consequence of embarrassment and other concerns of the patients as well, taking sexual history can be ignored in general history-taking because of reasons related to both parties.
3. A detailed history is much more important for differential diagnosis in patients experiencing sexual problems than in those with many other diseases. The cause of the sexual problem can be age, disease (e.g., diabetes) or any drug used. Differential diagnosis is important for accurate manipulation and treatment of the patient.
4. Sexual history taking may also play a role in the protection against some diseases (HIV infection and other sexually-transmitted diseases).

This subject should be included in the education of medical students because it has certain features besides the general rules of patient-physician relationship and history-taking.

What are the objectives of this education?

From the point of educated people (medical students),

- I. To learn the basic principles of sexual history taking and the rules to be followed
- II. To learn the situations that may cause sexual problems
- III. To take correct and complete sexual history by asking appropriate questions

I. Basic principles of sexual history taking and the rules to be followed Not judging:

Individuals make assessments in line with the value judgment of the population. Determinants such as religion, culture, ethnicity and sociocultural status may play a role in the formation of value judgment. Perspective on sexuality is also determined by the value judgment of population on this subject. The physicians as well are influenced by the value judgment of the population they live in and may perceive some sexual issues as taboo. It is expected that physicians' perspective on this issue should be in line with the universal values.

For example; even though considering an individual's sexual orientation towards persons of the same sex as lewdness is the perception of the majority of that population, a physician's perception in that way is out of the question.

Keeping privacy: Someone's keeping his/her sexual orientation (example; being homosexual) because of concerns such as weakness and ostracization that result from being in the minority due to sexual preference, and again, tendency for keeping extramarital affair, unintended pregnancy and virginity due to concerns about value judgment of the population and the events likely to be experienced, or sexual problems such as impotency which is perceived as weakness are the problems encountered while taking sexual history. **Ensuring patient privacy is one of the basic rules of sexual history taking. Therefore, interview with the patient should be performed alone (without anyone including family members).**

Comfort of the patient and the physician: Steps in discussing sexuality

1. Embarrassment
2. Avoidance
3. Treating as a joke
4. Relief

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In the population, the physician or the patient goes through the above-mentioned steps while discussing sexuality. Embarrassment is a basic factor that hinders the patient from explaining sexual problems and the event that leads to this problem. For example, in the presence of a sexually transmitted disease, the patient does not explain the extramarital affair on his/her own accord but does not hide it when questioned. The probability of telling his/her problem is increased in case the patient feels that he/she would not be judged, ashamed and this would not be shared with others. Embarrassment and avoidance of the patient can be eliminated by using an appropriate language. Treating the subject as a joke and making wisecrack remarks should be avoided. If the patient makes jokes, he/she should be listened calmly and relaxed.

Informing (debriefing): Giving information is one of the basic rules of patient-physician relationship. Giving information about the reasons for asking sexuality-related questions (necessary for differential diagnosis) and the problems that may develop if diagnosis or treatment is failed may facilitate sexual history taking.

An example question: *I am going to ask you some questions about your sexual life. I know these questions are quite personal and difficult to share. However, this information is important for your health.*

The patient should certainly be asked whether he/she has any questions. It should be kept in mind that the patient has difficulty in explaining on his/her own accord without being asked, particularly when sexuality is in question.

Establishment of a common language with the patient: Taking patient's sociocultural level into account is important in establishing a common language. It should be kept in mind that talking in medical terms would unfavorably influence the communication. Another important point on this issue is directly asking open questions to avoid patient's misunderstanding. It should be considered that there are many expressions relevant to sexuality in the population. (e.g.; extramarital sexual affair: such as illegal slaughtering)

Açıklama [Y1]: Bu deyim İngilizcede yok.

Example:

Inappropriate question: *What kind of sexual intercourse do you prefer?*

Appropriate question: *Which of these routes do you prefer during sexual intercourse, vaginal/oral/anal (or back)?*

Inappropriate question: *Do you protect yourself during sexual intercourse?*

Appropriate question: *Are you using condom during sexual intercourse?*

Inappropriate question: *Are you gay?*

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Appropriate question: *Have you ever had sexual intercourse with a male partner? (In case the patient is male)*

Appropriate question: *Is your sexual spouse (partner) female or male? (In case the patient is male)*

I. Situations that may cause sexual problems

A) Physiological conditions

Age: In females of advanced-age, vaginal atrophy and other structural changes that appear with menopause may lead to many problems, primarily pain. In case the patient is old and male, erection-related problems are most prevalent.

B) Pathological disorders

The most prevalent diseases in the population or the drugs used for their treatment can cause sexual problems. The following can be considered as the most common examples.

Diabetes: Poor circulation in genital organs due to general circulation problem caused by the disease leads to sexual dysfunction.

Cardiovascular diseases: Some medications, particularly some antihypertensive drugs, may lead to impotency and ejaculation problems in males. The leading class of drugs is the ACE (Angiotensin-converting enzyme) inhibitors. Alpha blockers, beta blockers, calcium channel blockers and thiazide diuretics as well have similar efficacy. Statins and fibric acid derivatives, which are used to lower cholesterol levels, can also cause sexual dysfunction.

Neurological causes: Sexual dysfunction can result also from spinal cord injuries and cerebrovascular problems.

Depression: One of the symptoms of depression is sexual anorexia. Moreover, antidepressants that act as *serotonin reuptake inhibitors*, tricyclic antidepressants, and monoamine oxidase inhibitors are the drugs that lead to sexual dysfunction.

Besides the above-mentioned reasons, many drugs (antipsychotics, anticonvulsants, H₂ blockers) are known to cause sexual dysfunction. Sexual dysfunction may be related to personality. Many reasons such as psychological reasons and unawareness as well could be responsible.

While taking medical history, it should be kept in mind that sexually transmitted disease can occur due to unawareness and unprotected sexual intercourse in young people.

II. Taking correct and complete sexual history by means of appropriate questions

The age and gender of the patient are recorded

Presenting complaints are recorded

Inquiry concerning the complaints is done (duration, time of occurrence, and other)

The latest sexual intercourse is questioned

- When
- With whom (spouse/nonspouse-regular/ random people/gender)
- Condom use (Regular, sometimes, condom tear?)

Intercourses in the last three months are questioned

- When
- With whom (spouse/nonspouse-regular/ random people/gender)
- Condom use (Regular, sometimes, condom tear?)?)

Questions relevant to the past sexual intercourses are asked

- Has there been any sexually transmitted disease?
- Has/have sexual partner/partners ever been diagnosed with any sexually transmitted disease?
- Does he/she have any other disease?
- Are you using any drug?
- Do you have allergy?

Questions concerning risk for HIV are asked

- History of blood transfusion?
- History of needle prick?
- History of IV drug use?
- Have you ever undergone HIV testing?

- Have you ever traveled to HIV-epidemic region? Have had any sexual intercourse in that region?
- History of suspected sexual intercourse?

Important questions to be asked in the sexual history about protection

- How are you protecting yourself from HIV and other sexually transmitted diseases?
- Do you have immunization against hepatitis B?
- What are you using for contraception (prevent pregnancy)?
- Have you ever undergone testing? (for HIV, Hepatitis B)

PRACTICAL APPLICATIONS WITH CASES

- Role-play practices with clinically-relevant cases

GUIDE FOR TAKING ANAMNESIS FROM CHILDREN

A. Primary Complaint

- Fever, headache, jaundice, cough, diarrhea, cyanosis, frequent respiration, frequent urination, vomiting, getting tired easily, tachycardia, syncope, nasal bleeding, rash, loss of appetite, lack of meconium discharge and urination, difficulty in breathing (wheezing, nasal wing breathing...), difficulty in sucking, bulged or sunken fontanelle, newborn with abnormal appearance, floppy infant, difficulty in gaining weight, bloody sputum, visual impairment, constipation, chest pain, crouching, palpebral edema, difficulty in feeding, swollen joint

B. History of the current disease

1. Characters of the symptoms

FEVER

- Character: Continuous, intermittent, remittent in a day, remittent in two days, only in the morning, in the evening
- Intensity: Mild, moderate, severe, which degree
- Time: Time of onset, duration
- Onset: Sudden, slow
- Frequency, progression: Intermittent, progressive, continuous
- Alleviating factors: Response to antipyretics ...
- Accompanying symptoms: Diarrhea, nausea, vomiting, cough, inattentiveness, seizure, etc

HEADACHE

- Localization: Forehead, nape
- Spread: Unilateral, beginning from the frontotemporal region and spreading over the nape
- Character: Pulsatile, sharp, compressive, penetrating like a knife
- Intensity: Mild, moderate, severe, which degree
- Time: Time of onset, duration (define as hour and day)
- Onset: Sudden, slow
- Acute, chronic
- Frequency, progression: Intermittent, progressive, continuous
- Predisposing factors: Intense light, abnormal smell, hunger, stress
- Alleviating factors: Twilit medium, certain foods
- Other related symptoms: Fever, diarrhea, nausea, vomiting, visual impairment, post-nasal discharge, etc

JAUNDICE

- Localization: Scleras, mucosa, skin
- Spread
- Character: Dirty-greenish yellow, orange color, intermittent

- Time: time of onset, duration
- Onset: Sudden, slow
- Acute, chronic
- Frequency, progression: Intermittent, progressive, continuous
- Predisposing/aggravating factors: Drugs, sepsis, hematoma
- Other related symptoms: Weakness, nausea, vomiting, signs of anemia, irritability, neurological signs, acholic stool
- Other related symptoms: Irritability, neurological signs, acholic stool

DIFFICULTY IN OR LACK OF MECONIUM DISCHARGE AND URINATION

- Character: Foamy, bloody
- Time: Is there any urination or stool discharge since birth?, since when there is no discharge?

(Stool discharge in the term and preterm normal newborns is completed by 94% and 99.8% respectively within the first 48 hours. Similarly, urination is completed by 90.5% in preterm newborns and by 99.4% in term newborns within the 48 hours)

- Onset: Sudden, slow
- Frequency, progression: Continuous, progressive, intermittent; how many in a day/week
- Other related symptoms: Abdominal distension, restlessness, persistent crying

COUGH

- Character: Like barking, horse whinny, like suffocating, irritating, dry cough, phlegmy cough
- Intensity: Mild, moderate, severe, awakening, impairing daily activities
- Time: time of onset, duration
- Onset: Sudden, slow
- Acute, chronic
- Frequency, progression: Intermittent, progressive, continuous
- Predisposing factors: Position, lying down, crouching, dust
- Alleviating factors: Position, resting
- Other related symptoms: Fever, sputum, diarrhea, shortness of breath, wheezing

DIARRHEA

- Character: Smell, viscosity, color, whether bloody or not
- Intensity: Mild, moderate, severe
- Time: Time of onset, duration
- Onset: Sudden/slow
- Frequency, progression: Intermittent, progressive, continuous
- Predisposing/aggravating factors: Certain foods, drugs
- Alleviating factors: Diet
- Other related symptoms: Fever, vomiting, weakness, weight loss

CYANOSIS

- Localization: Peripheral, mucosa (**Peripheral cyanosis** is seen only in the tips of the extremities in shock, cold, congestive heart disease, and peripheral vascular insufficiency. If cyanosis is present in the extremities together with the oral mucosa, lips, nose, ear lobe, and conjunctivas, then it is called **central cyanosis**.)

- Spread: Localized, whole body is cyanotic
- Intensity: Mild, hardly recognizable, moderate
- Time: Time of onset: early newborn period, 3 to 6 months, at the age of 4 years, etc... duration
- Onset: Sudden/slow
- Acute, chronic
- Frequency, progression: Intermittent, progressive, continuous, as attacks
- Predisposing/aggravating factors: Crying, nutrition, defecation, running, infection, difficult birth
- Alleviating factors: Resting, sleep, crouching, oxygen, drugs
- Other related symptoms: Inattentiveness, agitation, syncope, convulsion, tachypnea, shortness of breath, cough, tachycardia-bradycardia, fever-hypothermia, abdominal distension, difficulty in breathing ...)

DIFFICULTY IN SUCKING

- Intensity: Mild, moderate, severe
- Time: The day of onset, duration
- Onset: Sudden/slow
- Predisposing/aggravating factors: Infection, congenital anomalies: cleft palate, breast-related problems: absence of nipple
- Other related symptoms: Fever, irritability, restlessness, other congenital anomalies, hypotonus

FREQUENT BREATHING

- Intensity: Mild, moderate, severe (respiratory rate per minute)
- Time: time of onset, duration
- Frequency, progression: Intermittent, continuous, progressive, as attacks
- Aggravating factors: Nutrition, walking, climbing up stairs, running, etc
- Alleviating factors: resting, sleep, certain drugs
- Other related symptoms: Agitation, wheezing, nasal wing breath, intercostal retraction, suprasternal and subcostal retractions, cyanosis, sweating, tachycardia, weakness, infection, fever, loss of consciousness

GETTING TIRED EASILY

- Time: Time of onset: since birth, when one month, after the age of one year, etc
- Frequency, progression: Continuous, as attacks, progressive
- Predisposing or aggravating factors: Fever, infection, psychological trauma, anemia, palpitation, etc
- Alleviating factors: Resting, drugs
- Other related symptoms: Wheezing, shortness of breath, cyanosis, sweating, tachycardia, weakness, infection, fever, reduced alertness

TACHYCARDIA

- Character: the patient may sometimes be unable to differentiate tachycardia from palpitation (strong pulse with normal rate)
- Intensity: Pulse rate per minute
- Time: Time of onset, duration (1 to 2 min., several hours or days, etc ..)
- Frequency, progression: Progressive, intermittent, continuous
- Predisposing or aggravating factors: Exercise, excitement, sleep, resting, certain medications, foods
- Alleviating factors: Avoiding from certain foods, regular sleep, resting, special maneuvers such as retching and eye-massage, drugs

- Other related symptoms: Whether normal activity is affected, need to rest, cold sweat, pale color, weakness, syncope, signs of presyncope, etc

EDEMA

- Localization: Legs, back, scrotum, whole body, localized in a single leg
- Character: pitting edema, non-pitting edema
- Time: Time of onset, duration
- Predisposing or aggravating factors: Sudden effort, foods, drugs, infection, standing for a long time
- Alleviating or relieving factors: Resting, diet, drugs
- Other related symptoms: Shortness of breath, decrease in the amount of urine-change in color, orthopnea, paleness, sweating, tachycardia, itching

SYNCOPE

- Character: Together with loss of consciousness, together with contractions, postseizure sleeping period
- Time: Time of onset, duration(a few seconds, 5-10 minutes, longer)
- Acute, chronic
- Frequency, progression: Change in intervals, progressive increase in frequency and duration
- Predisposing or aggravating factors: Tachycardia, effort, fasting, long-term standing, press, seeing blood, excitement, drugs-certain foods, suddenly-without a significant cause, known cardiac disease
- Alleviating factors: frequent nutrition, regular sleep, avoiding from heavy effort, drug use, sitting and resting
- Other related symptoms: Extreme slowing down in tachycardia or pulse rate, reduced blood pressure, chest pain, cyanosis, cold sweating, dizziness, nausea, convulsion, neurological signs

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DIFFICULTY IN BREATHING

- Character: Wheezy, whimperingly, accompanied by nasal wings, problem during insprium or exprium (different from adults, abdominal breathing is seen). Respiratory rate; normal ranges are changed according to age (normal range in term newborn is between 40 and 50/minute)
- Intensity: Mild, moderate, severe
- Time: Time of onset, duration
- Onset: Sudden, slow
- Frequency, progression: Continuous, progressive, intermittent
- Predisposing/aggravating factors: Position, cold medium
- Other related symptoms: Cough, fever, vomiting, irritability, weak suckling

BULGING AND SUNKEN FONTANELLE

- Localization: Anterior or posterior fontanelle
- Character: Whether there is bulging, sunkness, pulsation
- Intensity: the size of bulging and the degree of sunkness should be known
- Time: Day of onset, duration
- Onset: Sudden/rapid
- Predisposing factors: Sepsis, position, crying
- Alleviating factors: Position, sleep
- Other related symptoms: Fever, inattentiveness, diarrhea, vomiting, restlessness, hypotonia, impaired suckling

FLOPPY INFANT

- Character: Lying position and frog position should be denoted
- Spread: Unilateral/ only in the lower extremity, decrease in suckling should be denoted
- Intensity: Mild, moderate, severe
- Time: Time of onset, duration
- Onset: Sudden/rapid
- Other related symptoms: Decreased suckling, baby with abnormal appearance, history of neurologic disease

2. Active internal and surgical problems likely to affect the primary complaint

3. Past situation concerning the symptom(s)

- Previous therapy?, response?, data of past records?
- What has the patient's relative made for the symptoms, operation?

4. Significant positive and negative assessments

5. Psychosocial status of the patient's family as the symptoms began

Expectations of the patient's relatives

The reason(s) for the patient to be brought to the physician

C. Personal medical history

1. Prenatal;

Whether the pregnancy is intended

Which pregnancy

Pregnancy duration

History of disease, drugs, exposure to radiation, drug use and smoking during pregnancy

2. Natal

Questioning concerning the baby

Type of delivery (cesarean, vaginal)

Time of delivery (early, in time, late)

The place where the delivery has been performed (home, health house, primary health care unit, hospital)

Duration of delivery

Birth weight

Cyanosis during birth, absence of suckling, history of weak Moro reflex

First minute APGAR score

Questioning concerning the mother

Excessive bleeding,

Time of placenta separation

Character of amnion fluid: Amount, color, whether including meconium

Character of umbilical cord (placental development anomalies, artery and vein anomalies)

3. Postnatal (after delivery)

Birth-related problems, cry immediately, cyanosis

APGAR score (1st and 5th minutes)

Early period infant feeding (time of first breastfeeding)

Time of first urination and first meconium discharge

Nutrition (amount of breast milk intake, time of switching to follow-on formula, reasons if switched earlier, timing for follow-on formula)

Immunization (consistency with schedule, seeing immunization schedule if any)

Previous accidents and intoxications

Previous surgical operations and indications

Questioning for childhood diseases and remarkable diseases (rubella, rubeola, varicella, hepatitis, meningitis.....)

Motor and mental development

D. Current health status

1. Immunization
2. History of hospitalization
3. Operation
4. Birth-related trauma
5. History of difficult birth
6. Blood transfusion

E. Family history

1. History of consanguinity
2. Health status of parents
3. History of sibling
4. Status of the sibling during neonatal period
5. History of abortion and stillbirth
6. Which live birth/from which pregnancy

F. Cognitive development (motor and psychosocial development)

a. Motor development

- Holding head up, creeping, walking with support and stepping, walking, climbing up stairs

b. Mental development

- Smiling, recognizing mother, following the light, reaction to sound, age at saying repetitive syllable (papa, mama), speaking, making sentence, identifying figures, social smiling

c. Fine kinetic motions

- Grasping, transferring objects from one hand to the other, using pencil, drawing cycle, creating towers using single or multiple cubes, riding a bike

G- Psychosocial status of the family

- Working and educational status of the parents, family dynamics

H. System overview

General: general status, relations with objects and subjects, following light, good looking/bad looking

Skin: Skin rashes and general appearance (color, character)

Head: Fontanelle and sutures, deformity (asymmetry), status of hairline

Eyes: Following the light, sunset sign, red eye, unilateral absence of lacrimation or excessive lacrimation, hypertelorism, hypotelorism

Ears: deformities, position

Nose: history of difficulty in nasal breathing

Mouth-throat: Early dental development, cleft palate and lip

Neck: Short neck, swelling

Breast: Tumor, nipple discharge

Respiration: Respiratory rate, history of meconium aspiration, history of entubation or assisted respiration at birth

Heart: Cyanosis, chest deformities, early murmurs

Digestive: Impaired suckling, time of first stool discharge, defecation character, excessive feeding, history of vomiting, midnight wake, pain due to flatulence, frequency of defecation and its relation with feeding, umbilical bleeding and discharge, time of umbilical drop off

Urine: time of the first urination, frequent urination, increased amount of urine, localization of testicles, phymosis, urination, change in scrotal color, external sexual appearance

Musculoskeletal: Joint deformities, congenital anomalies (syndactyly, polydactyly, rhizomelic-mesomelic dysplasia, ameliosis, simian line)

Neurologic: Floppy infant, weak suckling

GUIDE FOR PEDIATRIC EXAMINATION (GENERAL)

NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating, comfortable medium, the room should be at room temperature, not cold.
4	Allow the patient completely undressed
5	Left the examinations that are likely to bother and irritate the child at the end
6	Assess the age and sex of the patient and time of presentation as well
	ASSESSING ANTHROPOMETRIC MEASUREMENTS
7	Assess body weight and percentile
8	Assess height and percentile
9	Assess head circumference and percentile
	ASSESSING VITAL SIGNS
10	Measure body temperature
11	Count heart rate (pulse)
12	Count respiratory rate
13	Measure blood pressure
	EVALUATING GENERAL APPEARANCE
14	Assess general status and activity
15	Assess skin color, turgor and warmth changes
16	Assess anemia, jaundice and cyanosis
17	Assess congenital anomalous and dimorphic signs
18	Assess whether there is vertebral deformity, virilization, mass, color change, and midline defect
19	Assess deformity, edema, swelling, and warmth changes in the extremities and joints

GUIDE FOR PEDIATRIC EXAMINATION (GENERAL)

NO	STEPS
1	Wash your hands
2	Inform the patient about the examination and tell him/her to be comfortable
3	Allow patient rest for 5 to 10 minutes if he/she has climbed up stairs, walked, or tired, etc
4	Ask the patient to take off the clothes that are likely to hinder the chest movements
5	Be on the right side of the patient
	RADIAL ARTERY PULSE RATE MEASUREMENT SKILL
6	Position the right wrist of the patient in the way that the palm will be downward
7	Put your index, middle and ring fingers on the radial artery trace
8	Palpate the radial artery
9	Begin counting the pulses for 60 seconds as soon as you felt
10	Record the pulse rate, rhythm and strength
11	RESPIRATORY RATE MESUREMENT SKILL
	Observe chest movements (up and down), or feel them putting your hand on the chest (sternum) of the patient
12	Count the inspiration (up) movements of the patient's chest for 60 seconds
13	Record the respiratory rate
14	Inform the patient about the results of the measurements
15	Wash your hands

GUIDE FOR NEWBORN EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient's relatives about the examination and tell them to be comfortable
3	Allow the patient to be completely undressed
4	Assess the general status and activity
5	Assess body measurements (weight, height, head circumference) and percentiles
6	Assess the vital signs (temperature, pulse rate, respiratory rate, blood pressure)
	Assess skin color, appearance, temporary skin rashes, and birthmarks
5	Evaluate umbilical cord and vasculature, assess whether there is omphalocele or gastroschisis
	EVALUATING THE CRANIUM (HEMATOMA, SUCCADENEUM), FONTANELLE AND SUTURES
6	Slightly raise the patient's head holding from the occipital region
7	Assess the cranium, sutures and border of the anterior fontanelle palpating with the other hand
8	Assess whether there is pulsation, sunkenness, or bulging in the fontanelle
	EVALUATING NEWBORN REFLEXES
9	Approaching to the left or right side of the baby's mouth through the cheek with a soft object, finger, nursing bottle or nipple
10	Observing the baby turning his/her head to that side, capturing the nipple and trying to suck (9 th and 10 th steps are called as suckling-searching reflex)
11	Touching the palm of the patient with an object or finger approaching from the ulnar side
12	Observing the baby's grasping the hand (11 th and 12 th steps are called grasping reflex)
13	Same procedure can be applied to both soles (foot grasping reflex)
14	Slightly raising the baby after positioning his/her head in slight hyperextension supporting from the occipital region, or while laying on his/her back, and then leaving down suddenly
15	As a response, observe sudden abduction of the proximal arms, extension of the elbow, and abduction and opening of the fingers. The baby generally cries (14 th and 15 th steps are called as Moro reflex)
	EVALUATING HIP DISLOCATION
16	The newborn is laid on his/her back positioning the legs towards the physician
17	Grasping the left knee and proximal aspect with the right hand the thumb being in the medial and the index finger being in the lateral side (Ortolani Test)
18	Fixing the femur and pelvis with the left hand, reducing dislocated left femur head rubbing against the posterior aspect of the acetabulum via forced abduction of the same leg
19	The sound "click" indicates that the test is positive
20	Positioning the newborn as is in the 4 th step, a "click" sound is heard due to femur head's rubbing against the posterior aspect of the acetabulum by pushing the femur to the lateral side with the right thumb (Barlow test)
21	Thereafter, when pressed onto the major trochanter with the index finger, a second "click" is heard with pushing the femur head to the medial side indicating that femur head is now replaced
22	The same procedures are applied for the other hip

GUIDE FOR PEDIATRIC HEAD AND NECK EXAMINATION	
NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating comfortable medium, the room should be at room temperature, not cold.
4	Evaluate the general appearance of the head and neck
5	Assess brightness, color, distribution and structural changes of the hair
6	Assess cranial dysmorphism and asymmetry
5	Assess the status of the fontanelle and the sutures
6	Assess the facial appearance, expression and asymmetry
	EVALUATING THE EYES
7	Assess the structure of the eyes, eyelash and eyebrows
8	Assess the vision and following the objects and light
9	Assess color changes in the conjunctiva and sclera
10	Assess the light reflex and whether eye movements are free in all directions
	EVALUATING THE MOUTH
11	Assess the mouth and lip in terms of structure, color, and structural anomalies
12	Considering the age of the child, whether the teeth are present, and if so, their localization, number and type
13	Evaluate the presence of intraoral redness, bleeding, gingival hypertrophy and pus
14	Evaluate the pharynx, soft palate and tonsils
15	Assess halitosis, mouth dryness and increased salivation
	EVALUATING THE EARS
16	Assess the structure, malformation and presence of dropping ear
17	Evaluate external earway, discharge and tympanic membranes
18	Assess hearing and response to sound
	EVALUATING THE NOSE
19	Assess structure, flat nasal bridge and other anomalies
20	Assess septum deviation and nasal space
21	Evaluate the presence of discharge and bleeding
22	Evaluate smelling sensation
	EVALUATING NECK
23	Asses structure and anomalies (short neck, webbed neck)
24	Assess distension of large vessels and color changes
25	Evaluate the presence of lymphadenopathy and mass

GUIDE FOR PEDIATRIC CARDIOVASCULAR EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating comfortable medium, the room should be at room temperature, not cold.
4	Assess vital signs [body temperature, pulse rate (at resting and when calm), blood pressure and respiratory rate
	INSPECTION
5	Evaluate whether there is deformation in face and extremities
6	Assess presence of cyanosis, and if so, its type as well, distension in the neck veins, and vascular pulse
7	Evaluate thoracic asymmetry and deformity, type of respiration
8	Evaluate whether cardiac apex beat is visible, and its frequency
	PALPATION
9	Evaluate peripheral artery pulses symmetrically
10	Assess the place of strongest heart beat by palpating each hemithorax with your palm
11	Evaluate the presence of thrill by palpating each cardiac focus
12	Assess whether there is hand-raising motion (Parasternal lift) on parasternal palpation
	Evaluate whether the beats on apex are hand-raising and their intensity (weak-rapid, slow-strong)
	PERCUSSION
13	Perform symmetrically on each hemithorax from top to bottom and medial to lateral
14	Assess cardiac matity and submatity, evaluate whether it is changed with position
	AUSCULTATION
15	Assess the number and strength of beats on the cardiac apex
16	Listen to the cardiac sounds separately on each cardiac focus. Assess the character of the first and second heart sounds
17	Evaluate the presence of different sounds other than the heart sounds (ejection click, non-ejection click, sound of pericardial frotman), whether there is paired sound and whether is associated with respiration
18	Evaluate the presence of murmur in each focus; if any, evaluate its localization, time, strength, character, accompanying sounds and their spread

GUIDE FOR PEDIATRIC CHEST EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating comfortable medium, the room should be at room temperature, not cold.
	EVALUATION VIA INSPECTION
4	Evaluate the general appearance of the chest Assess whether each lung is equally involved in respiration
5	Asses respiratory rate, strength, and the presence of intercostal retraction
6	Assess the presence of pectus carinatum, excavatum, kyphosis, scoliosis
	EVALUATION VIA AUSCULTATION
7	Evaluate in complete lying position or upstraight position
8	Listen to each lung separately both through the anterior and posterior
9	Assess the pathological sounds such as rales and rhoncus according to the place where they are heard
	EVALUATION VIA PALPATION
10	Assess chest wall vibrations and skin crepitations
11	Specify the position of cardiac apex beat and trachea
12	Specify clavícula fracture, enlarged lymph nodes and any swelling
13	Assess Harrison's sulcus, rachitic changes and painful regions
	EVALUATION VIA PERCUSSION
14	Perform symmetrically on each hemithorax
15	It can be performed directly with the middle finger of a single hand in newborns and infants
16	In elder children, it is performed by beating intermittently on the place between the distal phalanx and the nail of the middle finger of one hand that is placed in line with the chest
17	It is performed by placing the finger perpendicular to the chest between the scapula and vertebra

GUIDE FOR PEDIATRIC ABDOMINAL EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating comfortable medium, the room should be at room temperature, not cold.
4	Abdomen should be examined being divided into 4 quadrants
	EVALUATION VIA INSPECTION
5	Evaluate asymmetric appearance, bulging or sinking
6	Assess whether there is omphalocele or gastroschisis
7	Control the umbilicus and specify whether there is umbilical discharge
8	Evaluate remarkable abdominal veins and caput medusa
	EVALUATION VIA AUSCULTATION
9	Abdominal examination begins with auscultation
10	Presence of increased or decreased bowel sound is assessed
	EVALUATION VIA PALPATION
11	Evaluate the presence of tenderness and defense
12	Specify the presence of palpable mass and its character
13	Assess the size of liver and spleen via palpation
14	Assess whether there is ascite
	EVALUATION VIA PERCUSSION
15	Specify the localization of tympanic and dull sounds via percussion in the entire abdomen
16	Evaluate the traube's space
	ANAL EXAMINATION
17	Assess the presence of anal atresia, fissure or fistula
18	Perform digital rectal examination if required

GUIDE FOR PEDIATRIC NEUROLOGICAL EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient and/or relatives about the examination and tell them to be comfortable
3	The patient should be examined in a non-irritating comfortable medium, the room should be at room temperature
4	Left the examinations that are likely to bother the patient and give pain to the end
5	Assess head circumference, weight, height, and their percentiles
6	Assess whether there is abnormal and/or involuntary movement
	EVALUATING COUNSCIOUSNESS
7	Assess the patient's alertness and awareness
8	Evaluate response to verbal and painful stimulation
9	Assess the level of coma via Glasgow scale in case of impaired consciousness
	EVALUATING CRANIAL NERVES
10	Evaluate light reflex, visual acuity and fundus
11	Evaluate whether eye movements are free in all directions
12	Evaluate the presence of facial asymmetry
13	Assess response to the ringing bell
14	Evaluate gag reflex
15	Evaluate the status of making sounds, speaking, chewing and swallowing
	EVALUATING MOTOR SYSTEM
16	Assess muscular tonus (hypotonus-spasticity)
17	Assess the muscle strength individually for the distal and proximal aspects of each extremity
18	Evaluate deep tendon reflexes (DTR) in each upper and lower extremities
	EVALUATING SENSE
19	Assess whether there is superficial sensorial disorder (touching, heat, pain)
20	Assess whether there is deep sensorial disorder (vibration, position)
	EVALUATING PATHOLOGICAL REFLEXES
21	Evaluate Babinski reflex
22	Evaluate Achille clonus
	CEREBELLAR EXAMINATION
23	Assess whether there is a balance and coordination disorder
24	Assess the presence of dissymmetry (finger-nose/knee-heel test) and dysdiadochokinesia
	EVALUATING MENINGEAL IRRITATION SIGNS
25	Assess whether there is neck stiffness
26	Assess whether there is Brudzinski neck and leg phenomenon positivity

PEDIATRIC ABDOMINAL EXAMINATION SKILLS

NO	STEPS
1.	Wash your hands
2.	Be on the right side of the patient
3.	Inform the patient (or relatives if the patient is so young) about the examination and make them feel comfort
4.	Allow the patient be undressed from the breast to the pubis
5.	First, evaluate whether the abdomen is involved in respiration and there is distension or deformity, abdominal skin color and vasculature via inspection
6.	Thereafter, obtain information about the abdomen and the complaints
7.	Listen to the bowel sounds or other pathological sounds via stethoscope
8.	Examine the patient leaving the painful regions to the end
9.	First of all, your hands should be warm. Begin the examination with percussion; beat the abdominal areas with index finger and assess the areas that display tenderness, defense and rebound
10.	In the next step, palpate with your dominant hand and evaluate the presence of mass, organomegaly and tenderness. Perform bimanual examination for the required organs
11.	Perform acute abdomen examination, and if any, perform regional examination directed for the diagnosis. For example, examining Mc Burney's point in appendicitis, etc
12.	Keep in mind that inguinal region should also be examined during each abdominal examination
13.	Inform the patient and the relatives about the results of the examination
14.	Record the results of the examination

MALE INGUINOSCROTAL EXAMINATION SKILLS

NO	STEPS
1	Wash your hands
2	Be on the right side of the patient
3	Inform the patient (or the relatives if the patient is so young) about the examination and make them feel comfort
4	Allow the patient lay on his back and be undressed below the waist
5	First inspect the external genitalia and each inguinal area
6	Evaluate the presence of erythema or edema over the scrotum or inguinal channel (in terms of acute scrotum)
7	First, examine penis and evaluate the normal localization of urethral meatus whether it is in the anterior (hypospadias) or dorsal aspect of the penis (epispadias). Investigate other penile anomalies, urethral cordy, penoscrotal web, micropenis, and ambiguous genitalia, etc
8	Examine the scrotum. Evaluate whether the testicles are in their places in the left and right scrotums by pressing on the inguinal channel with the left hand and palpating the testicle between the right thumb, index and middle fingers
9	Thereafter, decide whether there is testicle-related mass, hydrocele, retractile testis and varicocele
10	In the next step, inguinal region is examined while the testicle is palpated in the scrotum. Palpate the cord and elements over the pubic tubercle and the hernia sac, so called processus vaginalis, if any. Keep in mind that bowel and elements are sometimes included in the hernia sac.
11	During this examination, evaluate whether there is pain or tenderness in the inguinal channel or in the testicles (in terms of acute scrotum)
12	Wash your hand and inform the patient and the relatives

FEMALE INGUINOSCROTAL EXAMINATION SKILLS

NO	STEPS
1	Wash your hands
2	Be on the right side of the patient
3	Inform the patient (or the relatives if the patient is so young) about the examination and make them feel comfort
4	Allow the patient lay on her back and be undressed below the waist
5	First inspect the external genitalia and each inguinal area
6	Evaluate the presence of erythema or edema in the labium major or in the inguinal channel (in terms of incarcerated inguinal hernia)
7	First, observe each labium major and minor and evaluate whether they are normal. Then, separate the labium majors with the left thumb and index finger and evaluate the urethral meatus, vagina and hymen. Assess other genital anomalies such as imperforated hymen, urogenital sinus, cloake and ambiguous genitalia, etc, if any.
8	Evaluate in terms of vaginal discharge, bleeding, foreign body or vaginal mass, if any.
9	In the next step, inguinal channel and internal ring are examined; palpate the hernia sac so called processus vaginalis. Keep in mind that bowel elements or ovarian tissue are sometimes palpated in this hernia sac.
10	During this examination, evaluate whether there is pain or tenderness in the inguinal channel
11	Wash your hands and inform the patient and the relatives

Date and hour

Identity information: Name, age, sex, marital status, career, social security, address

From whom the anamnesis is taken

Primary complaint: low vision, pain, redness, discharge, double vision

History of current disease:

1.Character of the signs

Low vision:

- **Localization:** single eye, both eyes
- **Character:** Myopia, hypermetropia, is there difference concerning colors?
- **Intensity:** Mild, severe, no vision
- **Time:** Time of onset, duration
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressive, constant
- **Other concomitant symptoms:** Pain, redness, eye movement restriction, palpebral edema

Pain:

- **Localization:** single eye, both eyes, over the bulbus
- **Spread:** to the orbita and head
- **Character:** Blunt, penetrating, pulsatile, suspicious
- **Intensity:** Mild, severe, moderate, wakens at midnight?
- **Time:** Time of onset, duration, at which time of the day it begins
- **Onset:** Sudden, slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, intensive, progressive, shows variation in the day
- **Other concomitant symptoms:** Low vision, redness, discharge, palpebral edema

Redness:

- **Localization:** single eye, both eyes, fornix, perilimbal, mixed, sectorial
- **Time:** Time of onset
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressive, shows variation within the day
- **Alleviating factors:** Drugs
- **Other concomitant symptoms:** Pain, burning, piercing, discharge, chemosis, palpebral edema, low vision

Discharge:

- **Localization:** single eye, both eyes
- **Intensity:** Amount, whether the palabras are attached together in the mornings
- **Character:** Purulent, mucopurulent, serous
- **Time:** Time of onset, duration
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressive
- **Alleviating factors:** Drugs
- **Other concomitant symptoms:** Redness, pain, piercing, palpebral edema, swelling-redness on the nasal bridge

Double vision:

- **Character:** Does it change with the position of the head? Localization of the second vision, association with the position of looking; does it change with looking to the right, left, down, and up, association with distinct or far and near vision, does it occur when one of the eyes is closed (does double blind continue while looking with one eye)?
- **Time:** Time of onset, duration
- **Onset:** Sudden-slow

- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressive
- **Predisposing, aggravating factors:** Liquid intake, heart failure, drugs
- **Other concomitant symptoms:** Low vision, strabismus, eye movement restriction, systemic diseases (hypertension, diabetes mellitus), headache

2. Active internal, surgical or psychiatric problems likely to affect the primary complaint

3. Past status concerning the symptoms(s)

- Previous therapy? Response? Data of the past records?
- What has the patient done for the symptoms?

4. Significant positive and negative assessments

Past medical history

Pediatric/Adult diseases/hospitalization (Hypertension, diabetes mellitus, glaucoma, cataract)

Operations (has he/she ever undergone ophthalmologic surgery?)

Injuries/accidents (related to whole eye or a part; such as cornea)

Current health status

1. Medications, prostheses: Whether using eyeglass, lens, intraocular lens or ophthalmic prosthesis, last time of examination

2. Allergy and drug reactions: The type of the allergy, if any, symptoms, whether seasonal or not

3. Health screening (previous examinations, cholesterol, etc)

Family history

History of a remarkable disease among family members (demonstrate on genealogical tree if required)

Retinoblastoma or retina cancers, similar complaints with those of the patient, refraction disorders, strabismus, color blindness, cataract, retinitis pigmentosa, macular degeneration, allergy, etc

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Personal and social history

Living conditions, family pattern: motorcycle use that affects the eye, dealing with sports such as fencing, squash

History of working life/ work satisfaction: exposure to irritating gas, foreign bodies

Systems overview

Conclusion

GUIDE FOR VISUAL ACUITY MEASUREMENT SKILLS

Aim: To become skillful in visual acuity measurement

TOOLS: Snellen's chart

NO	STEPS
1.	Informing the patient about the examination
2.	Adequate illumination of the Snellen's chart
3.	Placing the patient at a known distance (6m) from the Snellen's chart
4.	Closing one of the patient's eyes
5.	Instruct the patient to read the letter, number, or figure lines on the Snellen's chart the biggest to the smallest
6.	Evaluating the last line that the patient have read without mistake
7.	Examining the patient's counting hand fingers beginning from the 6 m if he/she is unable to see the biggest letter on the Snellen's chart, and assessing the distance he/she is able to count the fingers
8.	In case of his/her being unable to count fingers, evaluating hand movement assessment from a distance close to the patient's eye
9.	In case of his/her being unable to assess hand movement, determining patient's assessing the direction of the light given to his/her eyes via a torch (projection)
10.	In case of his/her being unable to perceive the direction of the light, assessment of the existence of light (perception-absolute)

GUIDE FOR VISUAL FIELD EXAMINATION

Aim: To become skillful in visual field examination (via confrontation method)

NO	STEPS
1.	Informing the patient about examination
2.	Sitting in front of the patient at a distance of 1 m the eyes being at the same level with the eyes of the patient
3.	The patient is asked to close one of his/her eyes with the palm and the physician also closes his/her own opposite eye
4.	The patient is asked to fix his/her open eye to the forehead or nose of the physician
5.	Visual field is imaginarily divided into four quadrants: right, left, upper, lower, and the patient is made to count finger in each quadrant
6.	Asking the patient whether there is any field on the physician's face that he/she could not see
7.	Perform the same procedure for the other eye and record

EYE MOVEMENT EXAMINATION SKILL

What is eye movement?

The muscles that allow eye movements are innervated by three different nerves. Eye muscles, related cranial pairs, and the directions they allow movement are given in the table.

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Nerve	Muscle	Direction of the movement
6 th nerve	External rectus muscle	Allow lateral look
4 th nerve	Superior oblique muscle	Allow medial look
3 rd nerve	Other eye muscles	Allow looking to other directions

How to interpret

Wait for both eyes to move symmetrically. If a movement deficiency is observed in an eye, it means that there is a problem in the muscle that provides eye movement or in the nerve that innervates the related muscle. For example, if the right eye does not move to the right completely, there must be a problem in the external rectus muscle that allow the right eye move to the external side or in the 6th nerve that innerves this muscle.

NO	STEPS
1	Position the patient in the way that the light would come from the backside
2	Be on the opposite side of the patient
3	Hold an object that the patient could easily see (Pencil, key, etc)
4	Tell the patient to look at this object and to follow the movements of the object only with eyes
5	Touch the forehead of the patient with your other hand to prevent him/her to follow with head movements
6	Move the object from the midpoint to the right
7	Observe the movements of each eye
8	Return the object to the midpoint
9	Move the object from midpoint to the left
10	Observe the movements of each eye
11	Return the object to the midpoint
12	Repeat the 6 th - 8 th steps for the right superior direction
13	Repeat the 6 th -7 th steps for the right inferior direction
14	Repeat the 6 th -7 th steps for the left superior direction
15	Repeat the 6 th -7 th steps for the left inferior direction

PUPIL REFLEXES EXAMINATION SKILL

TOOLS: light source

What is pupil reaction?

In the presence of excessive light given to the eyes, pupils react by getting narrower. The afferent way for this reflex, which is called as pupil reaction, is the cranial pair (n. opticus) and the efferent way is the 3rd cranial pair (n. oculomotorius). When excessive light is given to one eye, the opposite pupil should also become narrower (due to indirect pupil reflex).



2nd

How to interpret

If the pupil reaction is bilaterally positive when the light is given to one eye, it indicates that the 2nd and the 3rd nerves on the same side and the 3rd nerve on the opposite side are intact. If none of the pupils gets narrower when the light is given to one eye, it means that the problem is in the 2nd nerve on the same side or in the 3rd nerve bilaterally. If the pupil gets narrower in one side and remains the same on the other side, then a problem is considered in the 3rd nerve on the side that remains the same.



given

NO	STEPS
1	Position the patient at approximately 30 cm distance being his/her head upright and the eyes looking to the opposite side
2	Give light to the right eye
3	Control whether there is narrowing in the pupil
4	Control the left pupil in terms of narrowing when you give light to the right eye
5	Wait for the pupils to be dilated
6	Then, give light to the left eye
7	Control whether there is narrowing in the pupil
8	Control the right pupil in terms of narrowing when you give the light to the left eye
9	Control the left pupil in terms of narrowing when you give light to the right eye

SENSE OF COLOR EVALUATION SKILL

TOOLS: Ishiara color book

NO	STEPS
1	Informed the patient about examination
2	Positioned the patient on the opposite side of your own
3	Allow the patient close his/her left eye with the left hand without compressing
4	Allow the patient read the first page of Ishiara color book
5	Allow the patient read the numbers consecutively in each page
6	Note how many of 20 pages have been correctly read
7	Allow the patient close his/her right eye with the right hand without compressing
8	Allow the patient to read the numbers consecutively in each page
9	Note how many of 20 pages have been correctly read
10	Sense of color is noted as; Ishiara Right: number of correctly read items/20 Left: number of correctly read items/20

FUNDUS EXAMINATION SKILL

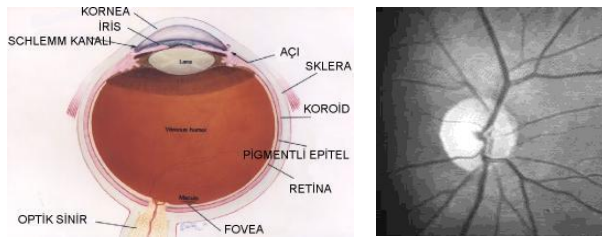
TOOLS: Ophthalmoscope, fundus examination simulator

What is ophthalmoscopy?

The procedure examining the posterior aspect of eye lens to evaluate the fundus is called as ophthalmoscopy. It is performed to evaluate the retina or macula.

How to evaluate

Fundus is examined with manual ophthalmoscope or biomicroscope by eliminating the effect of eye lens. For more detailed examination, the pupils can be dilated using eye drops to prevent them become narrow when the light is given.



NO	STEPS
1	Place the patient in a dim medium in the way that he/she feel comfortable
2	Ask the patient look just the opposite way with the head upright
3	Adjust the ophthalmoscope to be ametropy to eliminate your own refraction disorder
4	Adjust its light to be large, round and white
5	Stay at a distance of 30 cm from the patient
6	Hold the ophthalmoscope with your right hand to look into the patient's right eye
7	Look into the patient's right eye with your right eye
8	Direct the light of the ophthalmoscope targeting the pupil
9	You may control the movements of the patient by holding his/her head or shoulder with your left hand
10	Approach to the patient from the temporal side at an angle of 15°
11	Adjust the resolution of the ophthalmoscope as soon as the retinal vessels are seen
12	Find optic disk following the vascular trace
13	Then, examine the macula and posterior pole
14	Hold the ophthalmoscope with your left hand to examine the left eye
15	Use your left eye to examine the left eye of the patient
16	Repeat the 8 th -13 th steps for the left eye

GUIDE FOR PHYSICAL EXAMINATION OF HEAD AND NECK

Date and hour

Identity information

Name, age, sex, marital status, career, social security, from whom the anamnesis is taken

Primary complaint

History of current disease

Past medical history

1. Childhood diseases
2. Adulthood diseases/hospitalization (recurrent infections, chronic diseases), other skin diseases, sexually transmitted diseases
3. Surgical operations (regional lesions)
4. Injuries/accidents

Current health status

1. Medications
2. Allergy and drug reactions
3. Habits

Family history

1. History of remarkable disease among family members

Personal and social history

1. Marital status

System overview

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WHAT TO KNOW BEFORE THE PRACTICE

Anatomy and physiology of head and neck

GUIDE FOR PHYSICAL EXAMINATION OF HEAD AND NECK

General approach

The patient sits on the examination couch his/her legs hanging down freely. The physician stands in front of the patient. The medium should be illuminated well.

• Head-face:

- Observe the patient's face while he/she is motionless and while he/she is speaking. Observe facial skin. Pay attention whether there are lesions, scars, edema, masses, pigmentation and virilization on the skin (See skin examination).
- Inspect whether the eyes and ears are symmetric, observe their external characters
- Inspect the structure of the skull. Observe the size, shape, position of the head as well as its ratio to the neck and other parts of the body.
- Inspect hairy skin and the hair. Pay attention to the structure, quality, distribution of the hair, and to the pattern of hair loss, if any.
- Palpate the skull and skin of the head in terms of presence of mass or tenderness. Control whether there is swelling, lesions, scars, squamation, nits attached to the hair, etc
- Palpate the temporomandibular joint either in natural position or while moving. Note the movement restrictions, rubbing, "clic" sound, tenderness, increased warmth, and swelling
- Palpate the sinus regions (frontal, maxillary); tenderness or swellings, if observed any, should be recorded according to their localization.
- Test the presence and normality of the sense of touch on the forehead, cheek and chin by slightly touching with hand or with a piece of cotton (5th nerve).
- Ask the patient to show his/her teeth, to close the eyes, to wrinkle the forehead, to smile, to stick out the tongue, to puff the cheek and inspect all these (5th and 7th nerves). Pay attention to asymmetries.
- **Eye examination:** During inspection, observe the bulbus, symmetry, eye movements, and eyelids. Examine whether there is loss in eyebrows. Upper eyelid covers a part of the iris but not the pupil. Inspect both irises

and pupils. Normally, iris lines are remarkable and the pupils are round and equal in size. The patient is asked to look upwards to examine the conjunctiva and sclera, and the lower eyelids are pulled down (See Ophthalmology section for the detailed eye examination)

- **Ears:**

- Control whether the patient has hearing instrument
- Inspect the characters of the external ear. Control in terms of the presence of redness, swelling, deformity, asymmetry, bruising, etc
- Control tenderness moving the auricle up and down, pressing on the tragus and mastoid bone behind the ear.
- Palpate auricle. Pay attention to tenderness, cartilage deformities, etc
- Test the hearing. The physician closes one of the patient's ears with his/her hand. Question hearing of the patient by whispering (two-syllabic words or number) to the other ear from a distance of 30-60 cm and getting gradually closer, or with the sound made by rubbing two fingers against each other. Then, perform the same procedure to the other ear (8th nerve).
- Perform otoscopic examination (examine the adults by pulling the auricle to the postero-superior and the children by pulling the auricle to the posteroinferior):
 - Inspect the external earway (structural disorders, swelling, discharge, redness, foreign body, etc)
 - Inspect the tympanic membrane (color, perforation, collapse, swelling, inflammation)
- Perform Rinne and Weber tests
 - Weber test: Diaposone is vibrated and placed on the midline of the head (vertex, forehead or dorsum of the nasal bone). Ask the patient from where he/she hears the sound. Normally, the sound is heard in both ears or in the midline. Changes in hearing are interpreted according to the lateralization of the sound (it is lateralized to the opposite ear in sensorineural loss and to the same ear in conductive hearing loss).
 - Rinne Test: Hearing via bone conduction and via airway is compared in the same ear. Vibrating diaposone is put on the mastoid cortex to test the bone conduction. The diaposone is approximated to the channel without touching the auricle to test the airway conduction. In both tests, it is waited until no sound is heard. Under normal conditions, duration of hearing via airway should be 15 seconds longer as compared to the hearing via bone way. Shortening of the duration is interpreted as an indicator for conductive type loss.

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- **Nose:**

- Examine the structure of the nose and the position of the septum.
- Examine the nasal wings in terms of asymmetry or deformation.
- Control the nares. Observe whether there is nasal respiration and nasal wings are involved in respiration. Close one of the nares externally with the finger, asked the patient to close his/her mouth and observe whether both nasal spaces are open. Slightly push the nose tip up with your fingertip and examine the septum using a light source.
- The examination is performed with nasal speculum. Mucosa and septum are examined. Observe whether there is deviation, perforation, infection, mass, etc.
- Testing sense of smell: Smell test (1st nerve)
Various test materials are used. There are three groups; 1. Pure smells that stimulate the olphactor nerve (coffee, cacao, cinnamon, lavender) 2. Smells that stimulate the trigeminal nerve (methanol, acetic acid, formalin) 3. Smells that stimulate the taste component (chloroform, pyridine). The patients with anosmia are unable to feel the pure smells, but the other smells.

- **Mouth and pharynx:**

- Inspect the symmetry of external surface, color and moisture of the lips
- Oral cavity inspection is performed staying at the same level with the patient, asking the patient to open his/her mouth, and holding a tongue depressor in one hand and a light source in the other hand.
- Inspect the oral mucosa, gingiva, soft and hard palate, color and character of oral mucosa.
- Inspect the oropharynx: anteroposterior plica, uvula, tonsils, and posterior pharynx, and observe whether there is halitosis.
- Inspect the teeth: color, number, surface character
- Inspect the tongue: color, structural character, symmetry, movement character (7th nerve)
- Test the 9th and 10th nerves. Movement of the soft palate is controlled by asking the patient to make "aaaahh" sound. Speaking voice and swallowing characters are observed. Movement asymmetries are noted.

- To examine the 12th nerve, the tongue is evaluated in natural position when the mouth is open. Subsequently, the patient is asked to stick his/her tongue out and the position is evaluated; it is interpreted according to the position disorders (deviations to the opposite side in natural position, to the lesion side out of the mouth)
- Testing sense of taste: different substances are used in different concentrations for each of bitter, sweet and sour senses (glucose, sodium chloride, citric acid and quinine) and taste threshold is assessed (7th nerve).
- **Neck:**
 - Whether the neck and the thyroid are symmetric, asymmetry and swellings in the thyroid lobe and in the other regions of the neck, presence of visible lymphoid gland, swellings in the neck, scars, skin lesions, etc are inspected when the neck is in natural position and in extension.
 - Inspect whether there is jugular venous distension. Venous distension is not observed in the neck in the standing and sitting subjects. Normally, distension is observed in laying position.
 - Inspect whether there is restriction in neck movements. The details of neck and shoulder movement examination are specified in musculoskeletal system and neurologic examination.
 - 11th nerve is evaluated by evaluating the strength of sternocleidomastoid and trapezius muscles. To test the sternocleidomastoid muscle, the patient is asked to try to turn his/her head to the opposite side while his/her chin is pushed aside. To test the trapezius muscle, the patient is asked to buck against the physician's force applied on his/her shoulders raising the shoulders up. Weaknesses are noted.
 - **Palpation and auscultation of the carotid pulse:** The head is turned aside, the patient is asked to hold his/her breath for a short time, carotid pulse is palpated on the medial surface of the sternocleidomastoid muscle at the junction point of the chin and neck, and auscultation is performed for murmur. The procedure is performed both in the left and right sides, and the pulse strengths are compared.
 - **Lymph node palpation:** Superficial and deep lymphoid nodes should be palpated respectively and symmetrically. Preauricular, postauricular, occipital, tonsillar, submandibular, submental, superficial cervical lymph nodes, posterior cervical, and supraclavicular nodes are evaluated as the superficial lymphoid node groups, whereas jugular chain is evaluated as the deep node (via the palpation⁴⁹ performed to the deepness of the sternocleidomastoid muscle). The shape, size (giving its dimensions), adhesion, mobility, warmth, tenderness, consistency, and localization of the lymph node, as well as the color change on the skin over the lymph node, should be specified.
 - **Trachea** is palpated and its localization with respect to the midline is evaluated
- **Thyroid examination;**
- **Inspection**

The patient is asked to move his/her head slightly to the backwards
Inspect the place below the cricoid cartilage for the thyroid gland
The patient is asked to drink a glass of water and/or to swallow
Thyroid cartilage, cricoid cartilage and thyroid gland move upwards while swallowing and then return to their places
Pay attention to the upward movement, shape and symmetry of the thyroid gland
Thyroid gland is also examined by palpating with the fingers together with the inspection
Scars of past operations and color changes on the skin over the thyroid gland, localization, and whether it is moving while the patient is swallowing should be noted
- **Palpation**

The physician can examine the thyroid gland with his/her both thumbs standing in front of the patient. Primarily, the cricoid cartilage is found. While the tracheal rings are palpated upwards from the sternal notch, the largest upper ring is the cricoid cartilage. Thyroid isthmus is localized below the cricoid cartilage. Thereafter, the lobes and the margins of the thyroid gland are palpated with the thumb. The patient is asked to drink water and swallow during the examination. Normally, the gland is palpated different from the other tissues with its soft-rubber consistency. It is paid attention to the consistency, shape, and size of the thyroid gland, as well as whether it is painful during examination. Whether there is any nodule, the localization and size of the nodule, and whether it is mobile during swallowing are examined.

The other method of examination is performed palpating the cricoid cartilage and standing behind the patient. Fingers of both hands are placed symmetrically on the neck the index fingers to be under the cricoid cartilage. Moving thyroid tissue is palpated while the patient is drinking water and swallowing. Isthmus and both thyroid lobes are palpated moving the fingers. However, being unable to observe the

thyroid gland during palpation is the disadvantage of this method as compared to examining from the anterior.

- Auscultate the thyroid lobe putting your stethoscope on the thyroid gland
- **Venous pressure examination:** The position of the patient is changed to 45° sitting position from laying position. The patient is asked to turn his/her head to the opposite side. Determine the highest point where the jugular vein is seen or the pulsations are observed. Draw an imaginary parallel line from the level of Louis angle (the joint between the manubrium sterni and corpus sterni) to the ground as the patient lies in this position. Measure the distance between the point where the jugular venous distension is the highest and the Louis angle with a ruler perpendicular to the ground. Define the measurement in cm. Normal jugular venous distension should be 4 cm.

HEAD AND NECK EXAMINATION SKILL (general)

Head -Face:	See skin examination, pg....
1.	Skin ins.:
2.	Eye-ear ins (symmetry)
3.	Skull structure ins.
4..	Hairy skin-hair ins – palp.
5..	Cranial bones palp.
6.	Temporomandibular joint ins.-palp.
7.	Sinus palp – perc.
8.	Examination of the 5 th and 7 th nerves
Eyes:	See ophthalmologic examination pg:....
1.	eyelids – eye lash ins.
2. .	Palpebral fold ins.
3.	Eyebrow ins.
4.	Sclera-conjunctiva-iris ins.
5. .	Lacrimal glands palp.
Vision examination (see ophthalmologic examination pg:....)	
1	Snellen chart
Visual function	
1.	Pupillary response
2.	Corneal light reflex and examination
3.	Examination of the 3 rd ,4 th and 6 th nerves
4.	Visual field
5.)	Corneal reflex (5 th nerve)
Ophthalmoscopic examination	
1.	Test the red reflex
2.	Lenses ins.
3..	Optic disc-vessels-surface ins.
Ears	
1.	Whether using hearing instrument
2.	External earway ins.
3.	Auricula palp.
4.	Test the hearing (8 th nerve)
5.	Otoscopic examination
6.	Rinne-Weber Test
Nose	
1.	Nasal structure-position of the septum
2.	Controlling the nares
3.	Examination with nasal speculum
4.	Smell test (1 st nerve)
Mouth and pharynx	
1.	Lips and oral cavity ins.
2.	Oropharynx ins.
3.	Teeth ins.
4.	Tongue ins.
5.	Examination of the 12 th nerve

6.	Examination of the 9 th and 10 th nerves
7.	Sense of taste (7 th nerve)
Neck	
1.	Neck and thyroid symmetry
2.	Jugular venous distension ins.
3.	Movement restriction in the neck ins.
4.	Test the shoulder movements
5.	Palpation and auscultation of the carotid pulses
6.	Palpation of the lymph nodes
7.	Palpation of the trachea
8.	Thyroid palp. and ausc.
9.	Jugular venous pressure measurement

EAR EXAMINATION SKILL

TOOLS: Ear examination simulator, otoscope

NO	STEPS
1	Inform the patient about the procedure and obtain the consent of the patient or the relatives
2	Wash your hand and dry
3	Stay on the right side of the patient
4	Fix the speculum appropriate to the external earway of the patient to the otoscope
5	Open the electrical circuit of the otoscope and adjust the brightness
6	Turn the head of the patient to the left for the examination of the right ear and to the right for the examination of the left ear
7	Hold the otoscope with your dominant hand
8	Examine the retroauricular area, auricula and lateral aspect of the external earway exposing the light from outside
9	Pull the auricula with your non-dominant hand towards to the posterosuperior in the adults and to the inferior in the children
10	Slowly place the speculum of the otoscope in the external earway
11	Examine the external earway
12	Examine the manubrium mallei and umbo
13	Examine the light reflex
14	Examine the pars tensa and pars flaccida
15	Take the speculum outside and leave the auricula free
16	Take out the speculum from the otoscope
17	Put the speculum into the dirty instrument basin
18	Close the electrical circuit of the otoscope
19	Inform the patient about the results of the examination
20	Put the waste into the suitable waste basin and wash your hands

LEARNING GUIDE FOR RINNE-WEBER TEST APPLICATION SKILL

NO	STEPS
	RINNE-WEBER TEST APPLICATION SKILL
1.	Prepare required instruments
2.	Sit the patient in the examination chair
3.	Inform the patient about the procedure and obtain consent of the patient or the relatives
4.	Wash your hands and dry
	RINNE TEST
5.	Hold the handle of 512 Hz diaposone and hit your other hand
6.	Wait for continuous vibration
7.	Put the handle of the diaposone on the mastoid bone behind the ear
8.	Ask the patient whether he/she heard the sound
9.	If yes, ask him/her to inform you when the sound is stopped
10.	As the patient informed you, remove the diaposone and approximate it in front of the same ear
11.	Ask the patient whether he/she heard the sound
12.	Since the airway conduction is better than bone conduction, it is expected that the patient would hear the sound a bit longer
13.	Repeat the 1 st to 8 th steps for the other ear
	WEBER TEST
14.	Hold the handle of 512 Hz diaposone and hit your other hand
15.	Wait for continuous vibration
16.	Put the handle of the diaposone on the patient's skull on the line passing through the midpoint of the skull
17.	Ask the patient from which side he/she heard the sound
18.	If the patient hears better from a side, it is said that "weber is lateralized to that side"
19.	Inform the patient about his/her status

Identity information

Name, age, sex, marital status, career

Primary complaint

- Skin: Erythema, change in color and/or protuberance and/or squamation, vesicles, wounds
- Skin appendages: Increased/decreased perspiration, colorful and smelly perspiration (trigomaschalia); alopecia or virilization, structural changes of hair...etc., structural and color changes of nails.
- Mucosal changes: color changes of oral and external genitalia, protuberance, ulcers...etc.
- Subjective complaints: Pruritus, paresthesia, pain

History of current disease

1. Reason for attendance
2. Character of the signs

Skin

- Localization: Skin area(s) over the body that the complaint exists, Localized/ generalized.
- Character: Initial sign and the change in the lesion's character in time, extension; Ex: Type of itching, pain, leakage, efflux, bleeding, color, change in color, etc
- Intensity: Mild, moderate, severe, increased, remaining the same, decreased
- Time: Date of onset, association of occurrence and development with time, date of recurrence if any
- Onset: Sudden, slowly, continuous and progressive, remittent (duration of wellness, frequency of recurrence, duration of recurrence)
- Predisposing/aggravating factors: association with food, drugs, environmental conditions, occupation, and hobbies etc
- Alleviating/improving factors: Medication, seasonal changes, etc
- Concomitant symptoms: Systemic disease, high fever, joint pain

Hair

- Localization: Localized/generalized, symmetric or asymmetric
- Character: Sparseness, complete loss, whether there is new hair or not, whether preexistent hair is remarkable or not
- Intensity: Mild, moderate, severe, increased, remaining the same, decreased
- Time: Date of onset, association of occurrence and development with time, date of recurrence if any
- Onset: Sudden, slowly, continuous and progressive
- Predisposing/aggravating and/or Alleviating/improving factors: Trauma, habits, physical stress, medications used
- Other concomitant symptoms: Pain, itching, other rashes, status of other body hair, systemic disease, high fever, etc

Nails

- Localization: Single/multiple nail involvement, symmetric/asymmetric involvement
- Character: Color change or color, thickening, type of thickening, separation site, expansion, extension, etc
- Intensity: Mild, moderate, severe, increased, remaining the same, decreased
- Time: Date of onset, association of occurrence and development with time, date of recurrence if any
- Onset: Sudden, slowly, continuous and progressive
- Predisposing/aggravating factors: trauma, cosmetic habits, physical stress, etc
- Other concomitant symptoms: other accompanying rashes, status of the other nails, medications used, systemic disease or fever

3. Active internal, surgical or psychiatric problems that would affect primary complaint
4. Past status related to the symptoms, duration of and response to previous local/systemic therapy
5. Data of past records (Laboratory data, pathology report, etc)
6. Current local and systemic therapy and therapy duration
7. Patient's perception about the disease (impression/fear)
8. Effect of the disease and/or therapy on the life, work, and relations of the patient
9. Patient's expectations

Medical History

1. Childhood diseases
2. Immunization
3. Adulthood diseases/hospitalization (recurrent infections, chronic diseases) other dermatologic disease, sexually transmitted diseases
4. surgical operations (regional lesions)
5. Injuries/accidents
6. Transfusions, use of blood products

Current health status

1. Medications
2. History of allergy and atopia
3. Screening for health (past examinations, allergy tests, etc)
4. Diet, sleep, exercise
5. Habits: smoking, , alcohol, hypnotics
6. Travel
7. Hobbies (pet-keeping, gardening, painting, etc)

System review

SYSTEM-ORIENTED PHYSICAL EXAMINATION GUIDE FOR DERMATOLOGICAL DISEASES

General Information

General approach

Examination room should be illuminated well (natural daylight or similar artificial lighting).

Skin and the mucosa should be controlled. It is important to control the skin folds during general skin examination.

Inspection and palpation

A. Skin: The following characters should be paid attention during inspection and palpation of the skin:

1. Skin color: Increase/loss of pigmentation, redness, paleness, cyanosis: purplish color, icterus: may present in the sclera, palpebral conjunctiva, lips, hard palate, inferior surface of the tongue, and skin.
2. Skin moisture: control whether dry, sweaty, or oily.
3. Skin warmth: General warmth of the skin and of the reddish areas, if any, is controlled via the dorsal surface of the fingers.
4. The structure of the skin is controlled.
5. Skin mobility and turgor: evaluating whether the skin is easily lifted when hold (mobility), as well as the speed of its turning back to the original form (turgor).
6. The following characters are controlled in case of any lesion:
 - Anatomic localization and spread over the whole body: Is it localized or generalized? Is it on the open areas, in the intertriginous sites, or in the areas contacted with specific allergens (ring, bracelet, chemical substance, etc)?
 - Composition (linear, in form of sets, annular, arc-shaped, dermatomal, etc)
 - Type (macul, papul, vesicle, etc)
 - Color
7. The color of mucous membranes is controlled.
8. Lymph node examination: The size of the lymph nodes, as well as their adhesion to each other or to the adjacent configurations and whether they are painful or not, is investigated.

B. Hair: Both the skin and the hair should be examined. The amount of hair, its resistance, spread, structure, and color characteristic are evaluated via inspection and palpation. The presence of parasites is investigated as well.

C. Nails: Color and shape characters of each hand and foot nails are evaluated via inspection and palpation

SKIN EXAMINATION

NO	STEPS
1	Wash your hands
2	Inform the patient about the skin examination and tell him/her to be comfortable
3	Control whether there is Increased pigmentation in the skin and mucosa Loss of pigmentation, redness, paleness, cyanosis and jaundice
4	Examine whether the skin is dry, sweaty or oily
5	Test the general warmth of the skin with the dorsal side of your hand and test the warmth of the red areas if any
6	Control the surface of the skin whether smooth or not
7	Examine the mobility and turgor of the skin
8	Control the amount, distribution, structure and color of the hair via inspection and palpation
9	Examine the hand and foot nails via inspection and palpation in terms of color, shape and lesion
	FOR THE LESIONS
10	Specify the lesions on the skin
11	Observe the anatomic localization of the lesion and its distribution over the body
12	Define the shape of the lesions
13	Specify the surface characters of the lesion (smooth, filiform, rough, indented, dry, moistened, oily)
14	Control the array of the lesion (linear, in groups, annular, arc-shaped and dermatomal)
15	Examine the consistency (soft, hard) of the lesion via palpation
16	Control whether the lesion is painful on palpation
17	Specify the character of the mass lesion (adherence to the tissues below, mobility, hardness or softness, fine-peduncled or large, etc)
18	Inform the patient about the examination findings
19	Wash your hands

Date and hour

Identity information: Name, age, sex, marital status, career, social security, address

From whom the anamnesis is taken

Primary complaint: Chest pain, shortness of breath (respiratory distress, dyspnea), fatigue, cough, tachycardia, loss of consciousness (syncope), leg pain or cramps, edema-swelling

History of current disease:

1. Characters of the symptoms

Chest pain:

- **Localization:** on the sternum, whole chest wall, left chest wall
- **Spread:** Epigastrium, over the left breast, back, left arm, chin, teeth
- **Character:** Burning, pain, ache, press, compression, tearing, blunt, sharp, etc
- **Intensity:** Prevent working, need to stop until the pain relieves, waking from sleep
- **Time:** time of onset, duration (short- 2-10 min.; long- longer than 15 min)
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, at rest, with effort
- **Predisposing, aggravating factors:** Physical effort, emotional status, eating, coughing, cold weather, etc
- **Alleviating factors:** Resting, position change, exercise, nitroglycerine, digoxin, diuretics, beta blockers, antihypertensive drugs
- **Other concomitant symptoms:** Stress, respiratory distress, sweating, confusion, nausea and vomiting, syncope, cold-moist skin, cyanosis, paleness, swelling or edema (observed in anywhere, persistent or in anytime within the day)

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Shortness of breath (respiratory distress-dyspnea):

- **Character:** Difficulty in breathing, shortness of breath, zonesthesia, feeling choked, etc
- **Intensity:** Mild, moderate, very severe, etc
- **Time:** time of onset, duration (short-long)
- **Onset:** Dyspnea at rest, sudden, progressively increasing, only while sleeping at night (paroxysmal nocturnal dyspnea), etc
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressively increasing
- **Predisposing, aggravating factors:** Physical effort (effort dyspnea), increasing with laying on back (ortopnea), coughing, etc
- **Alleviating factors:** Increasing the number of the pillows (number of pillows used?), position change (becoming in sitting position, standing up, etc) taking oxygen, bronchodilators, diuretics, etc
- **Other concomitant symptoms:** Stress, chest pain, sweating, syncope, cyanosis, paleness, swelling or edema (observed in anywhere, persistent or in anytime within the day)

Fatigue (“Different from the usual or permanently unable to do daily activities, need to go to bed earlier”):

- **Localization:** General body fatigue, arm-leg fatigue
- **Intensity:** mild, moderate, significant
- **Time:** time of onset, duration (for a certain time within the day, all day long, for days, etc)
- **Onset:** In the mornings, every hour within the day, at nights; sudden, slow
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, progressively increasing
- **Predisposing, aggravating factors:** Physical effort (claudicatio intermittens)
- **Alleviating factors:** Resting, sleep, drugs
- **Other concomitant symptoms:** Respiratory distress with effort, chest pain, tachycardia, ortopnea, loss of appetite, nausea, vomiting

Cough:

- **Character:** Dry, phlegmy, irritating

- **Intensity:** Mild, moderate, significant
- **Time:** time of onset, duration (short-long)
- **Onset:** Sudden or progressively increasing, at nights, while laying on back
- **Acute-chronic:**
- **Frequency, progression:** Without a definite frequency, continuous and repetitive, etc
- **Predisposing, aggravating factors:** Physical effort, laying on back, unventilated medium
- **Alleviating factors:** Expectorating, changing the position, drugs

Tachycardia:

- **Character:** Rapid heartbeat, strong cardiac contraction, feeling like "a bird is flying in the chest", feeling emptiness in the heart and following strong beat
- **Intensity:** Very rapid, like the heart would skip a beat
- **Time:** time of onset, duration (short, long, for a moment, for several seconds or minutes, for hours, etc)
- **Onset:** Sudden, progressively increasing
- **Ending:** Suddenly, in progressively decreasing manner
- **Acute-chronic:** occurred for once or repetitive?
- **Frequency, progression:** rare, mean number in a certain time, changes in the intervals of recurrence, suddenly ending, progressively increasing, etc
- **Predisposing, aggravating factors:** Physical effort, emotional stress such as excitement, sadness, and anger, etc, certain beverages as coffee, etc
- **Alleviating factors:** Resting, holding breath, deep breathing, straining, pressing on the ocular bulbuses, pressing on neck, drugs
- **Other concomitant symptoms:** Stress, fever, sweating, chest pain, shortness of breath, feeling choked, syncope, desire to urinate

Loss of consciousness (syncope):

- **Time:** time of onset, duration (how long the syncope lasted for; sec...min....)
- **Acute-chronic:** occurred for once or repetitive?
- **Frequency, progression:** Rare, mean number at a certain time, change in the intervals of recurrence
- **Predisposing, aggravating factors:** Physical effort, emotional instability, a specific condition (sudden neck movement, change in posture, standing for a long time, mision, etc), certain foods (and romedotoxine, certain unrefined natural plant extracts), drugs (cardiac medications)
- **Other concomitant symptoms:** Tachycardia, paleness, cyanosis, enuresis-encopresis, contraction, any trauma mark, etc

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Leg pain or cramps:

- **Localization:** Calf, leg, toes, perineum, etc
- **Spread:** Gluteal region, low back, other part of the leg
- **Character:** Blunt, sharp, burning, pulsatile, etc; pain with specific localization that begins with movement
- **Intensity:** Prevent working, need to stop until the pain relieves
- **Time:** Time of onset, duration (short- 2-10 min.; long- longer than 15 min.)
- **Onset:** How it begins (sudden, progressively)
- **Acute-chronic:**
- **Frequency, progression:** Intermittent, continuous, number of the recurrences
- **Predisposing, aggravating factors:** Effort such as walking (how many kilometers?) and running, at rest, recent injury or immobility of the legs
- **Alleviating factors:** Resting, elevating the legs, drugs
- **Other concomitant symptoms:**
 Skin changes on the legs or feet: Cold skin, paleness, hair loss
 Pain-burning
 Redness or warmth over the vein, remarkable veins,
 Fatigue or hobbling: that occurs with walking, improves with walking
 Waking at night
 Leg-foot edema, wounds, paresthesia, etc

Edema -swelling:

- **Localization:** Ankle, anterior aspect of tibia, overall lower extremity, arms, eyes, abdomen, limited to face and upper part of the chest, extensive...

- **Character:** Pitting/non-pitting, tense
 - **Intensity:** Localized-in a certain area, extensive-whole body
 - **Time:** Time of onset, at which time of the day it is more remarkable
 - **Onset:** Sudden, in a progressively remarkable manner
 - **Acute-chronic:**
 - **Frequency, progression:** Intermittent, continuous, at rest, with effort
 - **Predisposing, aggravating factors:** Standing for a long time, daily activities, salty foods, spontaneously
 - **Alleviating factors:** Resting, crossing-elevating the legs, drugs (diuretics), salt-free foods
 - **Other concomitant symptoms:** Jaundice, dyspnea, getting tired easily, deformation of the toes, wounds, and color changes in the foot-leg
2. Active internal, surgical or psychiatric problems likely to affect the primary complaint
 3. Past status regarding the symptom(s)
 - Previous therapy? Response? Data of past records?
 - What has the patient done for the symptoms?
 4. Significant positive and negative assessments

Past medical history

1. Childhood diseases: Rheumatic fever, unexplained fever, joint swellings, etc; congenital heart diseases
2. Adulthood diseases/hospitalization: Chronic diseases, hospitalization for cardiac surgery or cardiac evaluation or disease, hypertension, bleeding disorders, lipid abnormalities, diabetes, coronary artery disease

Current health status

1. Health screening (previous examinations, cholesterol, etc)
2. Diet, sleep, exercise: Usual diet: amount of fat, food preference, history of special diet

3. Smoking, alcohol, hypnotic

Type of smoking (cigarette, cigar, pipe, chew tobacco, snuff, and narghile); Duration; Amount: daily number of packs/pieces, number of packs per year (smoking years X daily number of packs); Alcohol consumption: frequency, duration, the last time of consumption

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Family history

1. History of a certain disease among the family members (show on the genealogical tree if required): Diabetes, heart disease, lipid abnormalities, hypertension, congenital heart diseases, age of family members at the time the disease has been determined
2. Deaths: dates and age at death
 - Sudden death – particularly of the young or middle-aged relatives; cause of death

GUIDE FOR CARDIAC EXAMINATION

Aim: To become skillful in cardiac examination

STEPS OF THE PROCEDURE	
1.	Informing the patient about examination
2.	Asking the patient to take his/her clothes leaving the upper part of the body undressed
3.	Place yourself in front of the patient and observe the patient in terms of general signs of cardiovascular diseases (finger clubbing, cyanosis, edema, etc)
4.	Lay the patient in supine position being the head 30° elevated and stay on the right side of the patient
5.	Observing the anterior chest wall movements (precordial activity)
6.	Palpating the precordial activity with the fingertips of the right hand and assessing the localization of the strongest (maximum) beat (Cardiac apex, left ventricular area). Recording the localization, size and character of the beat
7.	Auscultation of the heart sounds: auscultating the aortic area on the 2 nd intercostal space on the right sternal side via the diaphragmatic side of the stethoscope while the patient is in the same position
8.	Auscultating the pulmonary area on the 2 nd intercostal space on the left sternal side via the diaphragmatic side of the stethoscope
9.	Auscultating the mesocardiac and tricuspid areas on the 3 rd , 4 th and 5 th intercostal spaces on the left sternal side and on the xiphoid process
10.	Auscultating mitral area on the cardiac apex via the diaphragmatic side of the stethoscope
11.	Auscultating 4 th and 5 th intercostal spaces on the left side of the sternum to assess pathologic heart sounds via the bell side of the stethoscope
12.	Auscultating cardiac apex via the bell side of the stethoscope turning the patient to the left side (to assess the spread of the sounds on the mitral area...)
13.	Auscultating the 3 rd and 4 th intercostal spaces on the left side of the sternum via the diaphragmatic side of the stethoscope positioning the patient in sitting position and leaning forward and providing him/her to hold his/her breath (to assess the pathological sounds and pericardial frotman...)
14.	Recording the characters of S1, S2 (sharp, soft, obscure, etc...), (S3), (S4), and the degree and configuration of any concomitant murmur (" 2/6", pansystolic", "crescendo", etc)
15.	Arterial pulse: control the regularity of pulse by pressing on the radial artery with the index and middle fingers from the lateral aspect of the wrist and record the pulse rate for one minute
16.	Re-controlling the rhythm by auscultating the cardiac apex in case of any dysrhythmia, and recording the character of the dysrhythmia and its association with breathing
17.	Placing the bell side of the stethoscope on the area where the chin and neck conjoins if the patient is middle-or advance-aged, telling him/her to hold his/her breath for a while, and recording the murmur on the carotid artery if heard
18.	Appropriately measuring the patient's blood pressure

Date and hour

Identity information (name, age, sex, social security, address)

From whom the anamnesis is taken

Primary complaint: Leg pain (at rest or with effort), cramp, wound, necrosis, gangrene, edema-swelling, redness, varicose veins

Arm pain (at rest or with effort), swelling, necrosis

History of current disease:

1. Characters of the symptoms

Leg pain:

- **Localization:** The right, left or both legs, inguinal, thigh, calf, feet, fingers, etc
- **Spread:** Gluteal region, low back, other parts of the leg
- **Character:** Blunt, sharp, burning, pulsatile, continuous or with effort, when stood for a long time
- **Intensity:** Prevent working, need to stop until the pain relieves, prevent daily activities, waking from sleep, need to receive analgesic continuously
- **Time:** Time of onset, pain duration, duration of complaint (hour, day, week, month, year)
- **Onset:** Sudden, slow
- **Acute, chronic**
- **Frequency, progression:** Intermittent, continuous, progressive
- **Predisposing/aggravating factors:** Efforts such as walking (the distance) and running, at rest, recent injury in the leg, long-term immobility (long journey, postoperative bed rest, etc)
- **Alleviating/lowering factors:** Discontinuing the effort, elevating the legs, resting, drugs
- **Other concomitant symptoms:** Skin changes in the legs or feet (coldness, paleness, hair loss, pain-burning), extensive or local redness or redness on the veins, remarkable veins, fatigue or limping-hobbling (occur with walking or improving with walking), wake at night, leg-foot swelling, wounds, hypoesthesia, cramp, etc

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Edema-swelling:

- **Localization:** Right, left or both side, ankle, anterior tibia, whole lower extremity, upper extremity, eyes; unilateral or bilateral
 - **Spread:** Limited to the abdomen, face and upper chest, extensive
 - **Character:** Pitting, non-pitting, tense
 - **Intensity:** Localized-in a definite area, extensive-in the whole body
 - **Time:** Time of onset, duration (hour, day, week, month, year), at which time of the day it is more remarkable
 - **Onset:** Sudden-slow
 - **Acute, chronic**
 - **Frequency, progression:** Intermittent, continuous, progressive
 - **Predisposing/aggravating factors:** Long-term standing still, during daily activities, salty foods, spontaneous
 - **Alleviating/lowering factors:** Resting, crossing or elevating the legs, drugs (diuretics) salt-free foods
 - **Other concomitant symptoms:** Dyspnea, getting tired easily, deformation of the toes, wounds and color changes in the legs-feet
2. Active internal, surgical or psychiatric problems likely to affect the primary complaint
3. Past status concerning the symptom(s)
 Previous therapy? Response to therapy? Data of past records?
 Things the patient has done for the symptoms

4. Significant positive and negative assessments

Past medical history

Current health status

Family history

Personal and social history

System review

Thoughts

GENERAL INFORMATION

I. SUBJECTS TO KNOW:

- 1-anatomy and physiology of vascular system
- 2-Normal examination methods and techniques: inspection, palpation, auscultation

II. TOPOGRAPHIC ANATOMY: Neck, sternocleidomastoid muscle, axilla, cubital fossa, wrist, groin-inguinal ligament, knee-popliteal fossa, ankle, dorsal surface of the foot

III. PHYSICAL EXAMINATION

Evaluation of peripheral vascular system mainly depends on the inspection of arms and legs, palpation of pulses, and examining for the presence of edema. Additional methods may be required in case of suspected abnormalities

General approach

The patient is required to be undressed appropriately for this examination. General signs such as cyanosis, edema, distribution of the hair, etc should be observed.

Inspection

1. Inspect the arms and legs bilaterally
2. Compare both sides in terms of size and symmetry
3. Inspect the extremities for the presence of swelling
4. Look for edema. Compare one of the feet and legs with the other in terms of relative size, as well as the significance of the veins, tendons and bones
5. Inspect the shape, appearance and course of the veins
6. Compare both arms and legs in terms of color of the skin and nail folds and the skin structure (regional redness, wound, scar)
7. Inspect the saphene vein system for the varicose changes while the patient is standing (standing makes any varicose formation to be filled with blood and to become visible)

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Palpation

1. Control the warmth of the arms and legs with the dorsal side of your hand
2. Always compare with the other side
3. Evaluate the thickness of the skin using your hand (bilateral).
4. Control whether there is pitting edema. Press with your finger for at least five seconds on the dorsum of each foot, on medial malleolus and on the anterior aspect of tibia. Normally no dent is left. Intensity of edema is evaluated on a 4-item scale from mild to significant (+, ++, +++ and ++++). The course of edema may be evaluated by measuring the smallest circumference over the foot and ankle and the largest circumference over the cannon bone.
5. Palpate the arterial pulses on the arms and legs

Auscultation

1. Look for murmur on the carotid artery via auscultation after palpating both carotid pulses
2. Auscultate the periumbilical area for the presence of murmur in the abdominal aorta
3. Both femoral arteries are auscultated for the presence of murmur after the femoral pulses are palpated

SYSTEMIC EXAMINATION

Evaluation steps

Upper extremity

1. Inspect both arms from the fingertips to the shoulders
2. Record whether there is difference in size and symmetry and whether there is swelling
3. Record the shape and appearance (pattern) of the veins
4. Record the color of the skin and nail folds and the structure of the skin
5. Palpate the radial pulse on the flexor surface of the wrist with the palmar surface of your fingertips. Partly twisting the patient's wrist may help you to feel this pulse.
6. Compare the pulses of two arms (pulses can be defined as increased, normal or lost).

7. For the brachial pulse, twist slightly the patient's elbow and palpate the artery with your other hand on the antecubital line on the interior aspect of the biceps tendon. Brachial artery can be felt on the upper part of the sulcus between the biceps and triceps muscles.

Lower extremity

The patient should be in supine position and undressed in a way that the external genitalia are covered but the legs are completely naked.

1. Inspect both legs from the groin and hips to the feet
2. Record whether there is a difference in terms of size and symmetry or there is swelling
3. Record the pattern of the veins, as well as whether there is venous dilatation
4. Record any color change, redness, scar or wound on the legs
5. Record the color and structure of the skin, color of finger folds and the distribution of the hair

GUIDE FOR VASCULAR SYSTEM EXAMINATION

Aim: To become skillful in peripheral vascular system examination

NO	STEPS
1.	Sit the patient on the examination couch his/her arms being undressed from the shoulders, stay on the opposite side of the patient and inform the patient about the examination
2.	Vascular examination in arms: Inspection of both arms from the fingertips to the shoulders (record the size, difference in symmetry, swelling, regional redness, wound, necrosis, and whether there is gangrene)
3.	Shape, pattern and course of the veins in each arm, and the color of the skin and finger folds are recorded
4.	Regional increase in warmth and the difference between the arms in terms of warmth are examined with the dorsal side of the hands
5.	The presence of edema is investigated pressing the lateral aspect of the arm with the thumb
6.	The thickness of the skin is evaluated by squeezing between the thumb and the index fingers and is compared with the other side
7.	The hand is positioned in slight extension and the radial pulse is palpated by slightly pressing the tips of the thumb and index fingers on the medial aspect of the styloid process through the lateral aspect of the flexor surface of the wrist. The procedure is performed for both sides and the pulse strengths are compared.
8.	The hand of the patient is positioned in slight extension; ulnar pulse is palpated on the lateral aspect of flexor carpi ulnaris tendon on the medial aspect of the flexor side of the wrist. The procedure is performed to both the right and left sides and the pulse strengths are compared
9.	Brachial pulse is palpated on the medial aspect of the biceps tendon on the antecubital line using your other thumb after slightly twisting the patient's elbow. The procedure is performed to both the right and left sides and the pulse strengths are compared
10.	Carotid pulse palpation and auscultation: The head is turned to aside, the patient is asked to hold his/her breath for a while, carotid pulse is palpated on the medial surface of the sternocleidomastoid muscle on the place where the chin and the neck conjoins and auscultated for the presence of any murmur. The procedure is performed to both the right and left sides and the pulse strengths are compared *
11.	Vascular examination in legs: the patient is positioned in supine position and provided undressed being the external genital organs covered but the legs are completely naked.
12.	Both legs are inspected from the groin and hips to the feet (size, symmetry, swelling, color change, redness, scar, or wound)
13.	Patterns of the veins and whether there is any venous distension (varicose change) are recorded
14.	Structure of the nails, color of the finger folds, distribution of the feet and toe hair, and the structure of the skin are observed and inspected
15.	The thickness of the skin is evaluated squeezing between the thumb and index fingers and compared with that of the other side
16.	The warmth of the legs are controlled with the dorsal side of the hand and both sides are compared
17.	The thumb is gently but strongly pressed on the dorsum of the foot, medial malleolus and anterior surface of the tibia for at least 3 seconds. Indentation, if any, is recorded and graded.
18.	Femoral pulse is palpated under the inguinal ligament by deeply pressing with the middle and index fingers approximately on the middle of the line between the anterosuperior iliac process and symphysis pubis. The procedure is performed to both the right and left sides and the pulse strength is compared
19.	The knee of the patient is grasped in the way that the fingertips of both hands will come together in the middle at the posterior. The knee joint is elevated upwards and passive flexion is applied to relax the fascia in the popliteal fossa. Popliteal pulse is felt in the deep by pressing the fingertips of both hands on the popliteal fossa on the midline of the

	posterior aspect. The procedure is performed to both the right and left sides and the pulse strengths are compared
20	Dorsalis pedis pulse is palpated pressing with the index and middle fingers on the place between the 1 st and 2 nd metatarsus on the dorsum of the foot (from the lateral aspect of the extensor hallucis longus tendon). The procedure is performed to both the right and left sides and the pulse strengths are compared.
21	Posterior tibial pulse is felt pressing with the index and middle fingers on the middle part of the line between the posterior aspect of the medial malleolus and the heel. The procedure is performed to both the right and left sides and the pulse strengths are compared
22	Periumbilical area and both femoral pulses are auscultated with stethoscope and the presence of murmur is investigated
23	The patient is raised for the veins to be filled, and primarily the veins of the leg are observed for varicose changes, and are palpated.

*The examination of the right and left carotid arteries must certainly not be done at the same time

GUIDE FOR CHEST EXAMINATION

Date and hour

Identity information (name, age, sex, marital status, career, social security, address)

From whom the anamnesis is obtained

Primary complaint: Cough, shortness of breath, chest pain, sputum, hemoptisia

History of current disease

1. Characters of the symptoms

2. Past status concerning the symptom(s)

- Previous therapy? response? Data of past records?
- What has the patient done for the symptoms?

Past medical history

Current health status

Smoking (package-year: for example: 2 packs/day for 10 years= 10x2= 20 package-year)

Family history

History of remarkable disease among family members (asthma, bronchitis, bronchiectasis, diabetes, cancer, tuberculosis)

GENERAL INFORMATION

I. SUBJECTS TO KNOW:

- Anatomy of the thorax and the contents
- Basic examination methods and accurate techniques: inspection, palpation, percussion, auscultation
- Topographic anatomy

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II. PHYSICAL EXAMINATION

General approach

- ❖ The patient should completely be undressed and wear patient examination apron. During the examination, the patient should be undressed in the way that the chest could be seen completely.
- ❖ Pay attention to perform inspection, palpation, percussion and auscultation steps respectively during the examination.
- ❖ The right and left sides should be compared following the examination
- ❖ Respiratory sounds of the patient are auscultated via naked ear (whether wheezing, stridor, etc are heard via naked ear)

Examination the chest through the posterior: For the examination of the back, the patient is asked to be in sitting position and to cross his/her arms and to hold the shoulder on the opposite side with each hand. (It is also possible to sit the patient in crossed-leg position or his/her hands are free at both sides)

If the patient is unable to sit even with assistance, he/she is examined being turned to the left and right sides.

Inspection

1. The shape of the chest is examined and observed whether there is asymmetry or deformity or enlargement of the antero-posterior diameter

Normally:

- * Transverse diameter is approximately two-fold greater than the AP diameter
- * There is not an absolute symmetry between the each side of the chest
- * Deformities of vertebra, chest wall and sternum may be seen

2. Whether there is any scar, lesion or rash and the color of the skin are noted

3. Respiratory rate, rhythm and deepness are observed

Normal respiratory rate is between 12 and 20 per minute.

Do not inform the patient that you are counting his/her respiratory sounds

Normal respiration is free and regular and is neither extremely superficial nor extremely deep.

4. The effort made for respiration is observed. It is observed whether there is intercostal and supraclavicular retraction. Intercostal retractions are more remarkable in the inferior aspects.

5. It is observed whether each side is involved in respiration on time and equally

Palpation

1. Palpate the costa and sternum and assess the areas that display sensitivity, deformity, abnormal pulsation, swelling, crepitation, etc

2. Evaluate the expansion and symmetry of the chest. For this purpose:

- Place your palm of both hands on the back of the patient
- Your thumbs should unite on the midline
- Ask the patient to breathe deeply
- Each thumb should equally drift away from the midline. If one of the hands drifts away less it indicates that the lung is involved less in respiration

3. Evaluate the tactile fremitus (vibration thoracic). For this purpose:

- Ask the patient to say consecutively “ninety nine” or “one-one-one”.
- Palpate the right and left sides comparatively using your palms.
- You feel the vibrations conducted through the airways in the lungs

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Percussion

Percussion provides the chest wall and underlying tissues to move and create audible sound and palpable vibration. The middle finger of the left hand is placed on the patient's back. Interphalangeal joint of the middle finger is beaten for several times with the middle finger of the right hand in the way that the wrist of the right hand would move freely.

1. Percute the each side from top to bottom. Skip the place where the scapula lies; first percute the scapulovertebral space and then the subscapular area targeting the intercostal spaces.

2. Compare each side in terms of differences.

3. Note every area you heard abnormal percussion sound.

Auscultation

This examination method evaluates the airflow throughout the tracheobronchial tree best. During auscultation, breath-induced sounds, abnormal sounds and suspected abnormality if any, the sounds conducted by the chest wall during patient's speaking with normal voice or whispering are investigated.

1. Ask the patient to inhale and exhale deeply through the mouth. Use the same points recommended during percussion for auscultation as well.

2. Compare each side for differences.

3. Note every area you heard abnormal sound

4. Perform examinations directed to the chest wall conductivity if required (conduction of whispering sound, conduction of speaking sound, etc).

Anterior Chest Examination: The patient is laid in supine position for anterior chest examination. Both arms of the patient should be on the both sides. Patients with shortness of breath should be examined elevating his/her head or in sitting position. Some clinicians prefer to perform anterior chest examination in sitting position in all patients. This also is an acceptable approach.

Inspection

1. Respiratory rate, deepness, rhythm. Note if the expiratory phase is prolonged.
2. Inspect the effort made for breathing. Inspect whether there is intercostal or supraclavicular retraction and whether the auxiliary respiratory muscles are involved (sternocleidomastoids, abdominal muscles, etc). Intercostal retractions are more remarkable in the inferior spaces.
3. Inspect whether there is symmetry and deformity of the chest or increase in the anteroposterior chest diameter.
4. Inspect whether each side is involved in respiration equally and at the same time
5. Note any scar, lesion or rash.
6. Inspect for other consistent signs (nail structure, localization of trachea, cyanosis, etc)

Palpation

1. Palpate the costae and sternum and identify the areas that display sensitivity or deformity.
2. Observe whether the trachea is in the midline. For this purpose, slightly insert your both index fingers into the space between the sternocleidomastoid muscle and trachea and assess whether the spaces are equal.

Percussion

1. Percute each side from top to bottom.
2. Compare each side for differences.

Auscultation

1. Ask the patient to breathe deeply through the mouth. Use the points recommended during percussion for auscultation as well. The primary goal is the auscultation of the right middle lobe, which is impossible to be auscultated through the back.
2. Auscultate each side from top to bottom.
3. Compare each side for differences.
4. Note every area you heard abnormal sound.
5. Perform examinations directed to the conductivity of the chest wall if required.

Chest Examination

NO	STEPS
	POSTERIOR EXAMINATION OF THE CHEST
1	Informing the patient about the examination and allowing the upper body part of the patient to be completely undressed
2	The patient is asked to sit and cross his/her both arms and to hold the opposite shoulder with each hand (the patient can sit in cross-legged position his/her arms being at both sides). If the patient is unable to sit, his/her back can be examined being turned to the left or right side
3	Evaluating the rate, deepness, rhythm of the respiration and the effort made for breathing
4	Evaluating the structure of the chest (asymmetry, deformity or increase in the anteroposterior diameter, lesion)
5	Note any scar, lesion or rash and the skin color
6	Observe whether each hemithorax is equally and simultaneously involved in the respiration
7	Evaluating the color of mucosa, earlobe and nail tips
8	Evaluating the structure of the fingertips (finger clubbing,) (3 rd , 4 th , 5 th , 6 th , 7 th , 8 th and 9 th steps are called as inspection)
9	Palpating costae and scapula and assessing the areas showing sensitivity (pain) or deformity
10	Palpating the chest wall and assessing whether there is crepitation on the skin due to subdermal emphysema
11	Evaluating the expansion and asymmetry of the chest wall. For this purpose:
12	Placing four fingers, except for the thumbs, of both hands on the back in the way that the palms will cover the chest wall
13	Conjoining the thumbs on the midline and slightly approximating the skin and the subdermal tissues to each other
14	Asking patient to breathe deeply through the mouth
15	Assessing whether the thumbs drift away equally from each other
16	Evaluating the tactile fremitus (vibration thoracic). For this purpose:
17	Asking the patient to say consecutively "ninety nine" or "one-one-one" in a normal voice
18	Palpating the right and left chest walls respectively using the ulnar sides of the palms.
19	Repeating the procedure symmetrically and comparatively from top to bottom and feeling the vibrations conducted through the airways in the lungs
20	Knowing that tactile fremitus can be increased and decreased due to various diseases
21	Evaluating the posterior chest wall via percussion, for this purpose;
22	Learning how to perform percussion [rhythmically beating for one or two times the middle finger of the non-dominant hand placed on the chest wall with the tip of the middle finger of the dominant hand (usually the right hand) leaving the wrist free]. Paying attention to other fingers not to touch the chest wall
23	Learning that the middle finger used for percussion should be placed in line with the intercostal space between the two ribs
24	Not to perform percussion on the scapulas; performing percussion on this area by placing the finger parallel to the vertebral line in the paravertebral area between the scapulas. Performing percussion to the intercostal space from the bottom of the scapulas
25	Identifying the areas with abnormal percussion sound and recording them
26	Evaluating whether the costophrenic sinuses are open. For this purpose: Percuting the areas during deep inspiration on the bottom of the right and left lungs respectively, where the sounds turned into matuity
27	Performing chest auscultation. For this purpose:
28	Providing silence for auscultation
29	Using the diaphragm side of the stethoscope
30	Asking the patient to breathe deeply through the mouth. Auscultating throughout complete inhalation-exhalation cycle using the points recommended for percussion

31	Auscultating each side from top to bottom
32	Investigating whether there is a difference between the two sides
33	Noting every area where abnormal sound is heard
34	Examining for the conductivity of the chest wall if required, for this purpose:
35	Investigating the sound conducted by the chest wall - heard via stethoscope during the patient's speaking with normal voice or whispering
ANTERIOR CHEST EXAMINATION	
1	Informing the patient about the examination and allowing the upper body part of the patient to be completely undressed
2	Laying the patient on the examination couch in supine position and providing his/her arms to lie at both sides
3	Evaluating the rate, deepness, rhythm of the respiration and the effort made for breathing
4	Evaluating the structure of the chest (asymmetry, deformity or increase in the anteroposterior diameter, lesion)
5	Palpating costae and scapula and assessing the areas showing sensitivity (pain) or deformity
6	Palpating the chest wall and assessing whether there is crepitation on the skin due to subdermal emphysema
7	Evaluating tactile fremitus (vibration thoracic). For this purpose:
8	Ask patient to say consecutively "Bornova-Bornova"
9	Palpating the chest wall using ulnar sides of the palms
10	Symmetrically and comparatively repeating the procedure from top to bottom of each chest wall and feeling the vibrations conducted through the airways in the lungs
11	In case of determining active tactile fremitus, consider consolidation in the underlying lung tissues (for example pneumonia)
12	Observe whether the trachea is on the midline. For this purpose, slightly insert your both index fingers into the spaces between the sternocleidomastoid muscle and the trachea and evaluate whether they are equal
13	Evaluating the anterior chest wall via percussion. For this purpose:
14	Learning the percussion technique [rhythmically beating for one or two times only the middle finger of the non-dominant hand placed on the chest wall with the tip of the middle finger of the dominant hand (usually the right hand) leaving the wrist free]. Paying attention to other fingers not to touch the chest wall
15	Learning that the middle finger used for percussion should be placed in line with the intercostal space between two ribs
16	Beginning the percussion from the supraclavicular fossae and going to the bottom throughout the right and left anterior chest wall respectively and comparatively continuing the percussion.
17	Assessing and noting the areas that display abnormal percussion sounds
18	Performing chest auscultation, for this purpose:
19	Provide silence for auscultation
20	Use the diaphragm side of the stethoscope
21	Ask the patient to breathe deeply through the mouth. Auscultating throughout the complete inhalation-exhalation period using the points recommended during percussion
22	Auscultating each side from top to bottom
23	Investigating whether there is difference between the two sides

GIDE FOR BREAST AND AXILLA EXAMINATION

Date and hour

Identity information: name, age, sex, marital status, career, social security, address

Origin: From whom the anamnesis is taken, and its reliability

Primary complaint: Mass or swelling, nipple discharge

History of current disease

1. Characters of the symptoms

Mass or swelling:

- **Localization:** Right or left breast, both breasts, in which quadrant, around the nipple
- **Character:** Size, mobility (whether adhered to the tissues around), shape, painful or tender, retraction on the skin over the mass
- **Time:** The time it is first realized, whether enlarged in time, enlargement rate
- **Predisposing/aggravating factors:** Drug use, relation with menstruation
- **Other related symptoms:** Nipple discharge or retraction, painful lymph nodes (axilla, supraclavicular fossa, inferior cervical region), sensitivity or pain, retraction or impaired breast contour

Nipple discharge:

- **Character:** Spontaneous or with squeezing (provocated), character (bloody, serous, milk color, colorless)
- **Time:** the time it is first realized; occurs occasionally or persistent?
- **Predisposing/aggravating factors:** Relation with menstrual cycle, activity, breast trauma, the last birth, breastfeeding history, oral contraceptive or antipsychotic drug use
- **Other concomitant symptoms:** Nipple retraction, mass or pain in the breast, headache, amenorrhea

Breast pain:

- **Localization:** Right or left breast, both breasts, in which quadrant, around the nipple
- **Character:** Penetrating, retracting, burning, pulsatile, aching
- **Intensity:** Mild, moderate, severe
- **Time:** Time of onset, duration
- **Predisposing/aggravating factors:** Posttraumatic, relation with menstrual cycle, skin irritation due to bra, concomitant redness of the skin, edematous swelling
- **Other related symptoms:** Mass or swelling, nipple discharge

2. Internal, surgical or psychiatric diseases likely to affect the primary complaint

3. Past status regarding the symptom(s)

- Previous therapy?, response? Data of the past records?
- What has the patient done for the symptoms?

4. Significant positive and negative assessments

Past medical history

Obstetric/gynecologic history

Menstrual history:
Obstetric history:
Menopausal history:
Breast diseases

Current health status

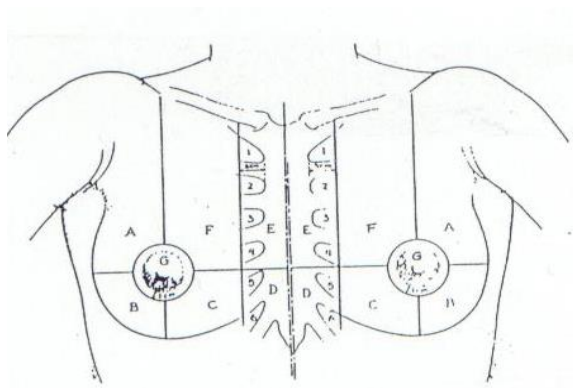
Routine breast examinations

Family history

Breast cancer
Benign diseases of breast

Personal and social history

System review



GENERAL INFORMATION

I. SUBJECTS TO KNOW:

- 1-Anatomy and physiology of the breast and axilla
- 2-Normal examination methods and techniques: inspection, palpation

II. TOPOGRAPHIC ANATOMY:

Breast quadrants: Breast is divided into quadrants via two methods to define the clinical signs. The first method divides the breast into four quadrants via the horizontal and vertical lines pass from the nipple. Two superior and two inferior quadrants are created: superior lateral, superior medial, inferior lateral and inferior medial. Other method divides the breast into six quadrants. In addition to the lines in the first method, the breast is divided into six quadrants via the vertical line passes from 2-3 cm lateral of the costochondral joint. The seventh quadrant is the region consists of the tissue below the circular line (retroareolar area) that passes from the distance 1 cm to the external border of areola.

The mass is defined according to the quadrant and clockwise. The distance of the lesion is described giving the distance to the nipple or border of areola.

III. PHYSICAL EXAMINATION

GENERAL APPROACH

The patient is informed about the procedure to relieve her restlessness. Meanwhile, the patient is asked whether she performs monthly self-examinations and whether she realized any swelling (if she does not know to perform self-examination, she is taught and encouraged to perform).

The most appropriate time for breast examination is the end of menstrual period. If a suspected nodule is detected in the premenstrual period, it is not considered as an exception and further examinations are performed immediately.

Inspection: both breasts and nipples are inspected while the patient is in sitting position and undressed to her belly. Skin changes, symmetry, contours and retractions are observed (while the arms are at the sides, over the head, on the waist, and extended forward parallel to the floor).

Palpation:

The patient is asked to lie in supine position. The patient's arm on the examination side is provided to be under her head and a pillow is put under her shoulder. Thus, the breast expands better over the thoracic wall and it would be easier to detect the masses.

The breast tissue is palpated in radiant manner or in circular manner parallel to the nipple slightly pressing with the tips of the 2nd, 3rd and the 4th fingers beginning from the nipple. If a mass is detected, its size, border between the tissues around and consistency are examined and noted. After the palpation is completed, areola is pressed with the fingertips in clockwise direction to identify whether nipple discharge is present.

AXILLA:

The physician stands just opposite of the patient while the patient is sitting on the examination coach upper half of her body being undressed. The patient's arm with an elbow at 90° angle is parallelly laid on the same arm of the physician, and the physician holds the elbow of the patient from the flexor surface and raises her hand. Now the patient's axilla is exposed and the physician's other hand is free and ready to palpate. The examination begins with the other hand as "all the fingers closed and extended forward". Overall soft tissues in the axillary fossa (axilla is pyramid-shaped and has four surfaces and one top) are palpated with fingertips.

GUIDE FOR AXILA EXAMINATION

NO	STEPS
1	Informing the patient about examination
2	Allowing the patient to sit on the examination coach upper half of her body being undressed and her legs are hanged downwards
3	Inspecting the axillary skin by raising her both arms
4	Pulling down one of the arms and laying on the physicians same arm with an elbow at 90° angle and allowing to stay loosely
5	The physician combines his/her own fingers
6	The physician's fingers indicate the midpoint of the patient's clavicle and press into the related axilla of the patient and reach to the available highest point
7	All the axillary surfaces are controlled in terms of lymph nodes by sliding up and down and pressing the fingers on the chest wall
8	Repeating the same procedure for the other axilla

GUIDE FOR BREAST EXAMINATION

NO	STEPS
1	Inform the patient about examination
2	Allow the patient to sit on the examination coach upper half of her body being undressed and her legs are hanged downwards
3	Inspection is performed while the patient's arms are hung down at her sides, over her head, on her waist and while both arms are extended forward parallel to the floor. Appearance, color, thickness of the skin, orange peel appearance Size and symmetry of the breast Character of the nipple
4	Asking the patient to lie in supine position
5	If the complaint is unilateral, begin the examination from the healthy side
6	Put a pillow under the shoulder on the examination side and ask the patient to put her hand under her head
7	The breast tissue is palpated in radiant manner or in circular manner parallel to the nipple slightly pressing with the tips of the 2 nd , 3 rd and the 4 th fingers beginning from the nipple.
8	Performing the same procedure for the other breast

Date and time**Identity information (name, age, gender, marital status, social security, address)****Taken from? The story, taken from**

Chief complaints: Abdominal pain, vomiting, diarrhea, constipation, jaundice, blood coming from the anus, difficulty swallowing

History of the current illness

1. Characteristics of the symptoms

Abdominal pain:

- **Localization:** Localization according to the abdominal quadrants (epigastrium, right upper quadrant, right lower quadrant ...)
- **Radiation:** Spine, thorax, groin ...
- **Character** blunt, sharp, burning, piercing, stabbing, cramp-like, superficial or profound
- **Intensity:** Mild, moderate, severe, cramping, restricting daily activities or requiring admission to emergency room
- **Timing:** The time it has begun and its duration (days, weeks, months, years)
- **Onset:** Sudden, gradual, increasing - decreasing in intensity
- **The frequency and progression:** Continuous, progressive, recurrent or intermittent
- **Precipitating or aggravating factors:** Relationship with meals (food items), defecation, urination, inspiration, body position, food and alcohol intake, stress, different hours of the day, relationship with trauma, hunger and satiety, and medications (aspirin, NSAIDs, chemotherapeutics)
- **Alleviating factors:** Drugs (antacids, spasmolytics, proton pump inhibitors, H2 receptor blockers), eating, vomiting
- **Accompanying symptoms:** Vomiting, diarrhea, constipation, gas, bloating, jaundice, pale or tarry stool passage, changes in the color, odor and texture of stool, changes in the color and amount of urine and in the force of urine flow, etc.

Vomiting:

- **Character:** Spontaneous-provocative, bilious, is the food in gastric content digested or is it fecaloid (in the form of intestinal content with fecal odor) or does it contain blood in red color or in dark color like coffee grounds?
- **Intensity:** How many times a day, how much of the food taken food is expelled out?
- **Timing:** The time it has begun and its duration (days, weeks, months, years)
- **The frequency and progression:** Continuous, progressive, recurrent or intermittent
- **Precipitating or aggravating factors:** Food, drugs; aspirin, NSAIDs, corticosteroids, chemotherapeutic drugs, alcohol, hunger, satiety
- **Alleviating factors:** Drugs; antacids, proton pump inhibitors, H2 receptor blockers, antiemetics, positional change ...
- **Accompanying symptoms:** Blood coming from the mouth, lack of gas-stool passage, abdominal distension, constipation, diarrhea, fever, abdominal pain, menstrual delay

Diarrhea:

- **Character:** Watery, excessive rice water stool, explosive diarrhea, color, blood, mucus, undigested food, fat-containing stool; odor;
- **Intensity:** How many times a day, amount of stool passed (the amount is low in colonic diarrhea and the amount of stool passed is larger in small intestinal diarrhea)
- **Timing:** The time the pain has begun and its duration (days, weeks, months, years)
- **Onset:** Sudden, slow
- **The frequency and progression:** Every day, few days in a week, changes in pattern
- **Precipitating or aggravating factors:** Foods, relationship with the stress, travel history, medications (laxatives, purgatives, antibiotics, chemotherapeutics)
- **Alleviating factors:** Antacids, spasmolytics
- **Accompanying symptoms:** Chills, fever, thirst, weight loss, abdominal pain and cramping, fecal incontinence, vomiting

Constipation:

- **Character:** Very hard, in the form of goat droppings, such as a thin pen
- **Intensity:** Number of defecations in a week
- **Timing:** When it began, when the last stool was passed
- **Onset:** Sudden, slow
- **The frequency and progression:** Intermittent, progressive, presence of the episodes of diarrhea and constipation,
- **Precipitating or aggravating factors:** Diet, recent changes in diet, not taking high-fiber food, drugs, surgery
- **Relieving Factors:** High-fiber food, enemas
- **Accompanying symptoms:** Abdominal pain, vomiting, tenesmus, lack of gas-stool passage, pain in rectum, blood in stool

Jaundice:

- **Localization:** Whole body, sclera
- **Character:** Pallor, straw yellow, orange
- **The frequency and progression:** Sudden or slowly progressive, goes away and comes back
- **Precipitating or aggravating factors:** Malignant diseases, choledocholithiasis, infectious causes, drugs, food
- **Accompanying symptoms:** Abdominal pain, chills, fever, dark urine, pale stool, itching

Blood coming from the anus:

- **Localization:** Coming from anus or rectum
- **Character:** Fresh blood, maroon-colored, tarry stool, blood with or after stool passage
- **Intensity:** Mild, moderate, severe, staining underwear, the amount (half a cup, etc. ..)
- **Timing:** When it began and how long it lasts for
- **Onset:** Sudden, slow progressive
- **The frequency and progression:** How many times in a day, did it occur once and then disappeared, relationship with defecation, does it increase and then decrease in time?
- **Precipitating or aggravating factors:** Food, drugs; anticoagulants, constipation
- **Relieving Factors:** Laxatives, diet
- **Accompanying symptoms:** Diarrhea, constipation, anal pain, itching, palpable mass, tenesmus, abdominal pain

Difficulty swallowing:

- **Character:** Difficulty in taking liquid or solid food
- **Intensity:** Mild, moderate, severe, not being able to swallow at all
- **Timing:** When it has begun
- **Onset:** Sudden, slow progressive
- **The frequency and progression:** Constant, progressive, recurrent
- **Precipitating or aggravating factors:** Extremely hot or cold food, solid foods
- **Relieving Factors:** Liquid foods, not eating
- **Accompanying symptoms:** Pain in swallowing, regurgitation

2. Ongoing internal, surgical or psychiatric problems that might affect chief complaints

3. Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

4. Significant positive and negative observations

Past medical history

Current health status

Family history

Personal and social history

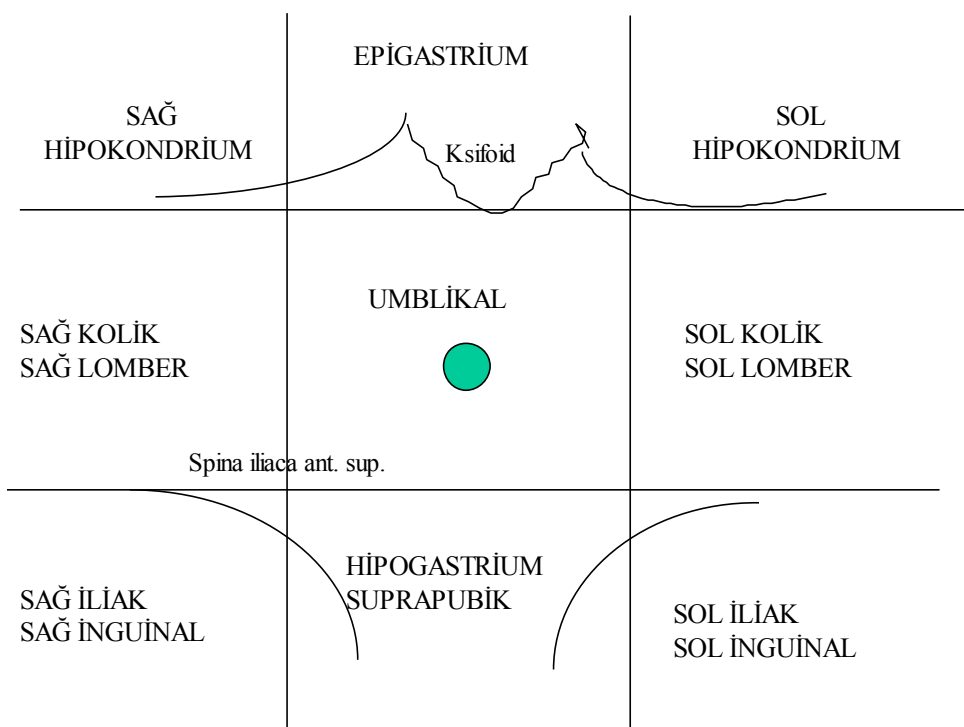
Examination of Organ Systems

GENERAL INFORMATION

ABDOMINAL EXAMINATION

The patient is examined in **supine** position except for some examination with particular purposes. The patient is asked to stay calm and relaxed. Patients are not routinely asked to bend the knees; however, patients with developed abdominal muscles may be asked to bend their knees. During the examination, pubis, external genitalia and inguinal region should also be examined.

The abdomen is divided into 9 or 4 areas during examination. The abdomen is divided into 9 segments with 2 midclavicular vertical lines and 2 horizontal lines passing from subcostal margin above and from spina iliaca anterior superior below (Figure 1). Likewise, the abdomen is divided into 4 quadrants with vertical and horizontal lines crossing at umbilicus (Figure 2).



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Figure 1. Dividing the abdomen into 9 segments and naming.

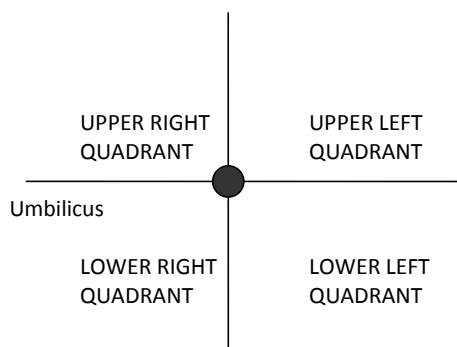


Figure 2. Dividing the abdomen into 4 quadrants and naming.

Four examination methods are applied in tandem in abdominal examination as it is the case in the other system examinations.

- **Inspection**

1. Whether or not abdominal wall is participating in breathing,
2. The skin of the abdomen,
3. Appearance of the abdomen, presence of asymmetry or distension ...
4. Edema or tumor in the abdominal wall,
5. Dilated veins in the abdominal wall,
6. Presence of pulsation in the abdomen,
7. Presence of peristaltic waves in the abdomen,
8. Localization of the umbilicus,
9. Presence of hernia in the abdominal wall.

- **Auscultation**

Unlike other systems, auscultation comes before palpation in gastrointestinal disorders. The reason for this not to provoke bowel movements by palpating the abdomen. Four quadrants of the abdomen are auscultated routinely for one minute using stethoscope. **Normally, bowel sounds are heard 4-6 times per minute.** Bowel sounds are hyperactive in cases of diarrhea and during initial phase of mechanical ileus. Bowel sounds are decreased in paralytic ileus. Auscultating **systolic murmur** in the projection of renal artery, if particularly unilateral, is an important finding that may suggest renal artery stenosis in a patient with hypertension.

- **Palpation**

During palpation, examiner's hands must not be **cold** and **wet**. During palpation, hand and forearm should be on the same plane, in other words the wrist must not be bent. The abdomen is palpated first **superficially** and then **deeper** with **one hand**. In superficial palpation, examiner rolls his hand over the abdomen by applying gentle strokes with the palm. The painful area should be examined last. It is a good method starting from the left inguinal region (this generally is the starting point if there is no pain) and moving towards the costal margin. This palpation shall give an idea about the abdominal muscle tone; one should not press the abdomen more than a half or one-cm deeper. In deep palpation, deep pressure is applied to the abdomen with hand and fingers as far as it is possible whilst rolling the hand left-to-right and up and downwards to have a better idea about the examined section. If the abdominal wall is firm or in obese patients, supported palpation can be performed to examine deeper organs by placing one on top of the other. Bottom hand remains inactive while palpation is performed by pressing with the fingers of the top hand. The purpose of deep palpation is to check whether or not any of the abdominal organs is painful or if there is an abdominal mass. If an abnormal mass is felt, following features should be explored:

a. Localization, b. Size, c. Depth, d. Shape (round, oval, liver, spleen, etc.), e. Consistency (firm, soft, elastic, etc.), f. Surface condition (smooth, rough), g. Whether or not it is painful, h. Mobility (mobile, fixed), i. Pulsatility, j. Movement with respiration.

Carnett's maneuver is performed to realize if the mass is related to a pathology in the abdominal wall or to an intra-abdominal pathology. For this maneuver, patient is asked to raise the lower extremities without bending the knees; this causes straining of abdominal muscles. Intraperitoneal mass disappears with this maneuver while masses in the abdominal wall do not.

Palpation of the liver and spleen is performed by starting from inguinal region and moving towards costal margin. While the hand is in deep palpation position, finger tips are pressed gently upwards as they are pointing the left shoulder. Organs should be felt during deep inspiration. If the spleen is exceeding costal margin, this implies enlarged spleen 2-3 times the size of normal. Palpated mass is the spleen itself if splenic **notch** is felt. **Upper margin** of the liver should be determined to comment on liver enlargement. Normally, the upper limit is **the 5th intercostal space** while moving downward from the 2nd intercostal space at the midclavicular line (Ludwig's angle). When the upper limit is found below this point, liver can still be in normal size even if it is distended few cm. below the costal margin. Therefore, **total vertical size** of the liver (**TVS**) is measured. TVS is the distance between upper and lower margins of the liver that were found by percussion. Normal TVS: Between 6-12 cm.

PAINFUL POINTS IN THE ABDOMEN

Murphy's point: Intersection of the right costal margin and right midclavicular line. This section is tender in acute and subacute cholecystitis. It is performed by placing the fingers to this area and the patient is asked to breathe in; if the patient feels pain and holds his/her breathe, **Murphy's maneuver** is considered positive.

Mc Burney's point: One third of the distance from the right spina iliaca ant. sup to the umbilicus. This point is tender in acute appendicitis.

Richter Monroe line: A line at the inguinal region symmetrical to Mc Burney's point. This line is particularly suitable for abdominal puncture.

Rebound symptoms: In a patient with acute abdominal condition, rebound tenderness is considered positive if pressure on a painful area causes more pain and further pressure is increasing its intensity and finally more severe pain is felt when the examining hand is released. This is an important finding that indicates peritonitis.

Guarding: This is muscle rigidity that is found during deep palpation in a patient with acute abdomen. It represents peritonitis.

- **Percussion**

Whole abdomen is percussed in a **radial manner** starting from xiphoid (Figure 3). Normally, **tympanic sounds** are heard during abdominal percussion.

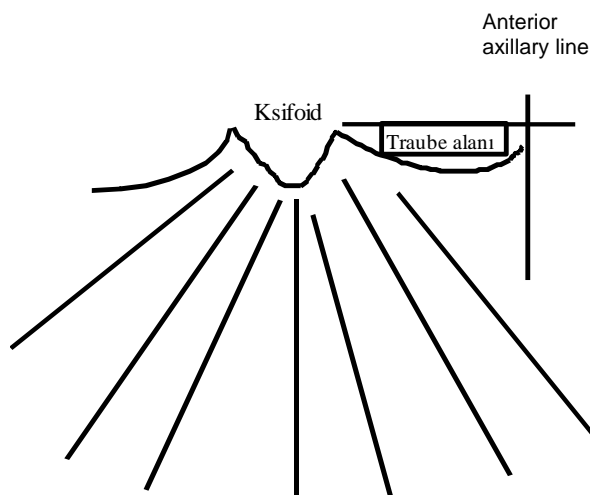


Figure 3. Percussion in abdominal examination in a radial manner and Traube's space.

Traube's space: Region encompassed by a horizontal line drawn from xiphoid to the left side, left costal margin and anterior axillary line (Figure 3). Normally, stomach produces tympanic sound due to air in fundus. Dullness to percussion on Traube's space is particularly found in splenomegaly; it rarely indicates enlargement of neighboring organs such as liver or the kidney.

Checklist

1. The patient must be given an explanation about the examination.
2. The patient is asked to lie on his/her back and the examiner moves to the right side of the patient.
3. The abdomen is inspected by dividing it into 9 or 4 sections.
4. Each of the 4 quadrants is auscultated for one minute.
5. Superficial and deep palpation is performed in a respective order starting from the left lower quadrant and proceeding with left upper quadrant, right upper quadrant and right lower quadrant.
6. Liver and spleen size is determined starting palpation from inguinal region.
7. Total vertical size of the liver is measured.
8. Traube's space is percussed to evaluate organ enlargement.
9. Percussion is performed in a radial manner starting from xiphoid.

ABDOMINAL EXAMINATION GUIDE

Purpose: Acquisition of skills in abdominal examination

NO	STEPS
1	Explaining to the patient about the examination
2	Asking the patient to lie on his/her back, undressing and moving to the right side of the patient
3	Inspection of the abdomen by dividing it into 9 or 4 quadrants
4	Auscultating each of the four quadrants for one minute
5	Abdominal percussion in a radial manner starting from xiphoid
6	Percussion of the liver: Percussion over the right midclavicular line from top to the bottom until hearing dull sound at the upper margin of the liver Over the same line, percussion of the abdomen from bottom to the top until hearing dull sound at the lower margin of the liver Measuring liver size between these two limits. This must be normally between 6-12 cm in adults.
7	Spleen percussion: Percussion of lower intercostal space in anterior axillary line. Normally, tympanic sound is heard at this region (Traube's space). Asking the patient to take a deep breath in and repeat percussion of the same region. Dullness to percussion at this area indicates splenic enlargement.
8	Superficial and then deep palpation of the abdomen starting from the left lower quadrant and proceeding with left upper quadrant, right upper quadrant and right lower quadrant in a respective order
9	Palpation of the liver Palpation of the abdomen starting from the right inguinal region up to the costal margin At this moment, asking the patient to take a deep breath in Feeling that the liver edge touches to the finger tips or slides under the hand while the patient is breathing out. The normal liver is not tender.
10	Palpation of the spleen: Palpation of the abdomen starting from the left inguinal region up to the left costal margin The patient is asked to take a deep breath in Feeling that the spleen edge touches to the finger tips or slides under the hand while the patient is breathing out. Using the right hand, pressing down the costal margin
11	Hernia examination, (Valsalva maneuver - determining hernia sac during straining, determining the size of the facial defect)
12	Is there costovertebral angle tenderness? Costovertebral angle tenderness is elicited by gently tapping both lumbar areas Is there tenderness in the projection of ureters?
13	Performing digital rectal examination Size of the prostate, its consistency, presence of hardness or induration or nodules are examined Is there pain, temperature increase or tenderness in digital rectal examination?
14	The patient is asked to dress

LYMPHATIC SYSTEM EXAMINATION GUIDE

Department

Date:

Date and Time

Identity information (Name, age, sex, marital status, social security, address)

Taken from?

Chief complaints: Enlarged lymph nodes, swelling of extremities

History of the current illness

1. Characteristics of the symptoms

Enlarged lymph nodes:

- **Localization:** Head and neck, supraclavicular, axillary, epitrochlear zone, inguinal, other
- **Character:** Number, tenderness, consistency, size, mobility
- **Timing:** The time it has begun and its duration (days, weeks, months, years)
- **Onset:** Sudden-slow
- **Precipitating or aggravating factors:** Infection, surgery, trauma
- **Alleviating factors:** drugs
- **Accompanying symptoms:** Pain, fever, redness, warmth, itching

Swelling in extremity:

- **Localization:** Unilateral, bilateral
- **Character:** Pallor, erythema, redness along the vessel
- **Timing:** The time it has begun and its duration (days, weeks, months, years)
- **Onset:** Sudden-slow
- **Precipitating or aggravating factors:** Heart or kidney disease, surgery, infection, trauma, venous insufficiency
- **Alleviating factors:** Drugs, elevation, compression socks
- **Accompanying symptoms:** Warmth, erythema, pallor, ulceration

2. Ongoing internal, surgical or psychiatric problems that might affect chief complaints

3. Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

4. Significant positive and negative observations

Past medical history

1. Recurrent infection, chronic diseases

2. Operations (trauma to the regional lymph nodes)

Current health status

Family history

Family history of a significant disease (anemia, immune deficiency, cancer, tuberculosis)

Personal and social history

Examination of Organ Systems

LYMPHATIC SYSTEM HEAD AND NECK EXAMINATION GUIDE

NO	STEPS
1	Giving patient information about the examination, asking the patient to sit upright on examination table
2	Inspection of midline structures and cervical triangles in both sides of the neck
3	Ensuring that the hands of the examiner are not cold or wet
4	Palpation of occipital lymph nodes using both hands
5	Palpation of posterior auricular lymph nodes over mastoid processes using both hands
6	Palpation of preauricular lymph nodes using both hands
7	Palpation of the parotid area and retropharyngeal lymph nodes: Pressing gently with finger tips to and rubbing front side of tragus, bottom of lobulus auricula and posterior side of the angulus mandibula
8	Palpation of the submaxillary and submental lymph nodes below the mandibula
9	Tilting the patient's head and neck side to side
10	Palpation of superficial cervical lymph nodes over sternocleidomastoid muscle: Rubbing SCM muscle by pressing gently its posterior side with the thumb and front side with the tips of 2nd, 3rd and 4th fingers
11	Deep palpation of the cervical lymph nodes: Deep palpation by holding SCM muscle with thumb, 2nd, 3rd and 4th fingers
12	Same process is followed for the other side of the neck
13	Palpation of supraclavicular lymph nodes just above the clavicles with 2nd, 3rd and 4th finger tips

LYMPHATIC SYSTEM AXILLARY EXAMINATION GUIDE

NO	STEPS
1	Giving patient information about the examination
2	Chest must be totally undressed
3	Having the patient seated on the examination table with the legs freely dangling over
4	Inspection of the axillary skin while raising the patient's right arm above
5	Wearing Gloves
6	Bringing down the same arm to a relaxed position
7	Combining the fingers of the left hand
8	Pressing the right axillary fossa to reach the highest point possible while fingers pointing midclavicular
9	The fingers are pressed on the chest wall while rubbing up and down to check if there is swelling
10	Same process is repeated on the other side
11	Slightly supporting the right forearm during pronation
12	Palpation of the fossa in posterior superior side of humerus medial condyle with the tips of 2nd, 3rd and 4th fingers of the other hand
13	Same process is repeated on the other side

LYMPHATIC SYSTEM INGUINAL EXAMINATION GUIDE

NO	STEPS
1	Giving patient information about the examination, the patient must be totally undressed below the waist
2	Having the patient lay down on the examination table
3	Wearing gloves on the hand used for examination
4	Applying gentle pressure on inguinal region using the tips of 2nd, 3rd and 4th fingers and rubbing in circular motion
5	Deep palpation of inguinal region in circular motion using the tips of 2nd, 3rd and 4th fingers
6	Same process is repeated on the other side
7	Palpation of popliteal fossa with the tips of 2nd, 3rd and 4th fingers
8	Same process is repeated on the other side

NERVOUS SYSTEM EXAMINATION GUIDE

Identity information: Name, age, gender, marital status, occupation, hand dominance

Chief complaints:

Headache, weakness, seizure

History of the current illness:

1.Characteristics of the symptoms

HEADACHE:

Localization: Unilateral (is it always at the same side, or does it switch from one side to the other?), involving the entire head, localized

Character: Throbbing, squeezing, pressure sensation, stinging, blunt, stretching, tearing, burning

Intensity: Mild, moderate, very severe

Timing: The time it has begun (at what age), duration (for a certain period of time in a day, all along the day, for days)

Onset: In the mornings, at night times, in every hour of the day, at the evening; sudden, slow

Acute-chronic: Duration of the symptoms (did it pop up suddenly and severely?) Was it mild at the beginning and then worsened?)

The frequency and progression: Intermittent, continuous, increasingly

Precipitating or aggravating factors: Stress, hunger, sleep, exercise, certain foods (cheese, chocolate, alcohol, etc.) menstruation

Alleviating factors: Rest, sleep, medications

Accompanying symptoms: Loss of appetite, nausea, vomiting, sensitivity to light and sound, etc.

WEAKNESS:

Localization: Single limb, both lower limbs, four limbs, the right or the left half of the body, distal or proximal parts of the limbs

Timing: The time it has begun, duration (for a certain period of time in a day, all along the day, for days)

Onset: In the morning, at night hours, in every hour of the day, in the evening, does it fluctuate during the day?

Acute-chronic: Did it appear suddenly or progressed with gradual increases?

The frequency and radiation: Intermittent, continuous, increasingly

Precipitating or aggravating factors: Muscle activity, such as infection

Alleviating factors: Rest, sleep, medications

Accompanying symptoms: Twitching, stretching, involuntary throwing, incontinence

SEIZURES:

Character: Generalized, partial, does it affect consciousness?

Timing: The time it has begun, duration, frequency

Onset: In the morning, at night hours, in any hour of the day, during sleep, sudden

Acute-chronic:

The frequency and progression: Intermittent, status

Precipitating or aggravating factors: Stress, fatigue, insomnia, irregular use of medication

Alleviating factors: Rest, sleep, medications

Accompanying symptoms: Do you have the feeling that a seizure is coming? (Do you have aura?) Do you have a complete loss of consciousness? Do you have staring blankly, strange behavior or gestures? Is it accompanied by contraction in the arms and legs or bouncing seizures? Are you foaming at the mouth? Do you have a urinary-fecal incontinence? Is it accompanied by nonsense-repetitive motions? Do you fall on the ground? After a seizure (postictal period): Confusion; Meaningless speech; Sleep; Headache

Past medical history

1.Childhood illnesses (Febrile seizures)

Prenatal: (Maternal), Previous pregnancies, Infection, Drug use, Contraception, Radiation; the child's movements in pregnancy

The first development: Nursing, Lifting head; Unsupported sitting, Crawling, Walking, Speaking, Sphincter control, School success

2.Vaccination

3.Adult illnesses / hospitalizations: Convulsion; Epilepsy; Infections

Current health status

Family history:

Significant history of a certain illness in family members (indicate on the family tree if necessary): Hereditary Diseases; Neuropsychiatric disorders; Diabetes; Hypertension; Malignancy; Infection

Personal and social history

Examination of Organ Systems

NERVOUS SYSTEM SEMIOLOGY

STROKES

Reduction or complete loss of muscle strength in one part of the body is the most common symptom of nervous system disorder. In neurology, the former is termed as **paresis** and the latter that corresponds to stroke is termed as **paralysis** or **plegia**. The most frequently used terms in neurology clinics are hemiplegia, hemiparesis or paraparesis, all of which point out a decrease in muscle strength or loss of muscle contraction.

Hemiplegia is the complete loss of strength in one half of the body. If the weakness is limited to a single arm or leg, this is referred to as **monoparesis**. Weakness in three extremities is referred to as **triparesis** and weakness in four extremities is referred to as **quadriparesis** or **tetraparesis**. Weakness involving two legs is referred to as **paraparesis**.

Similar terminology applies also to the cranial and peripheral nerves: Such as facial palsy, oculomotor nerve palsy, radial nerve palsy

DISORDERS OF MUSCLE TONE

Muscle tone can be clinically described as a muscle strain that is felt during passive movements at rest and it is provided by segmental mechanism. Upper neural structures in brain stem, cerebellum and cerebral hemisphere has a role in tuning up the muscle tone as is the case in reflexes. Decreased muscle tone is referred to as **hypotonia** and increased muscle tone is referred to as **hypertonia**.

INVOLUNTARY MOVEMENTS

Tremor: Rhythmic movements resulting from simultaneous or consecutive contraction of agonist and antagonist muscle (muscle groups which bring about an opposite movement).⁸⁸

Resting tremor; is a coarse tremor that is generally seen in distal upper extremities at rest (can be defined as money-counting); it is seen in extra-pyramidal disorders such as Parkinson's disease.

Intention tremor; it does not occur at rest, however, it appears with the limb movement and becomes more evident while approaching the target; it is seen in cerebellar disorders.

Choreic movements: Irregular, non-rhythmic, involuntary movements in various amplitudes that are seen like shake out. It may involve different muscle groups such as limbs, body, face, mouth and tongue; Huntington chorea and Sydenham chorea are common examples.

Athetosis: It is characterized by convoluted and writhing movements that resemble dance figures and compared to choreic movements, it is slower and shows continuity.

Dystonic movements: They are involuntary movements that last for longer period compared to athetosis and they are associated with increased muscle tone and pain. Usually seen in proximal parts of the extremities.

Myoclonus: Is sudden, jerky, involuntary movements in different parts of the body. It often accompanies cortical lesions; however, it may also occur under physiological (sleep, hiccups, etc.) conditions.

SENSORY DISORDERS

- **Superficial sensation (Exteroceptive sensation):** Touch, pain and heat (hot, cold) senses.
- **Deep sensations (Proprioceptive sensation):** Position, passive movement, vibration and deep pain senses.
- **Cortical senses:** These are combined forms of the above senses that are integrated to the parietal cortex: Stereognosis, graphesthesia, tactile localization, such as two-point discrimination

It would be appropriate to define some terms before reviewing the major types of sensory disorders seen in neurology clinics:

Paresthesia: Subjective sensations such as pricking, tingling, burning or numbness.

Hypoesthesia, anesthesia: Refers to the reduction or loss of the sense of touch.

Hypoalgesia, analgesia: Refers to the reduction or loss of the pain sensation.

Thermoanesthesia: Loss of normal sense of temperature such as cold and hot.

Hyperesthesia: Hypersensitivity to tactile stimuli.

Allodynia: Pain sensation occurs with non-painful (such as touch) stimuli.

Hyperpathia: One kind of hyperalgesia. It is seen in thalamus syndrome. Pain threshold is increased in affected side of the patient's body. But when the stimulus exceeds the threshold that causes unpleasant and intolerable pain.

Phantom pain (Phantom limb pain): Very uncomfortable feeling of pain in an absent extremity that occurs after arm or leg amputation.

Causalgia: Constant and intolerable burning pain that occurs in partial lesions of peripheral nerves (i.e. n. medianus) rich from sympathetic fibers.

CRANIAL NERVES

According to the localization of the lesion, a wide variety of pathologies may occur in cranial nerve disorders; some are as follows.

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Lesions of 1th cranial nerve: Loss of smell (Anosmia)

Lesions of 2nd cranial nerve:

Hemianopsia: Loss of vision in half of the nasal or temporal vision field.

Quadrantanopsia: Loss of vision in one quarter of the vision field. If the visual defect is above, it is called superior quadrantanopsia and if below, it is called inferior quadrantanopsia.

Homonymous hemianopsia: Loss of vision in temporal field of one eye and in nasal field of the other.

Lesions of 3rd, 4th and 5th cranial nerves

Ptosis is a dropping of the upper eyelid

Nystagmus, is involuntary movement of eye globes. This movement mostly occurs while the eyes are looking in one direction. Nystagmus rarely occurs while the eyes are in neutral position

Lesions of 7th cranial nerve:

Facial nerve palsy has two types; central and peripheral. In central type, only lower part of the face is affected (mouth deviates to the opposite/healthy side), and in peripheral type, all muscles in lower and upper half of the face are affected (same half of the face is paralytic, one cannot raise the eyebrows or close the eyes and mouth deviates to opposite side).

REFLEX DISORDERS

Reflex arc is the basic unit established by nervous system and motor activity that complement each other.

Reflex arc consists of five components: 1 - receptor organ that reacts to physical changes in external or internal environment, 2 - afferent neuron that conducts the stimuli to reflex centre, 3 Integration centre in m. spinalis or brain stem, 4 - efferent neuron that conducts the reflex response to the environment, 5 - effector organ that generates a response.

It is possible to classify the reflexes on the basis of superficial and deep tendon reflexes (DTR). 3rd group of reflexes are pathologic reflexes. These reflexes are normally negative. Examples include Achilles clonus and Babinski's sign. Reflex responses are graded as abulia, hypoactive, normoactive, marked and hyperactive.

Diminished or Loss of Reflexes

A Tendon Reflexes

When a tendon reflex is diminished or lost, the first thing to remember is a disorder in one part of the reflex arc. This is seen in the lesions of lower motor neurons.

2 - Hyperactive Tendon Reflexes

This finding, which points out a disorder of pyramidal pathway, provides information about the location and the level of the lesion in cortico-spinal tract depending on the distribution and the level of reflexes.

GAIT AND POSTURAL DISORDERS

Hemiplegic gait: It is characterized by swinging the affected leg. In these patients, shoulder is adducted and flexed, elbow, wrist and fingers are flexed due to the increase in adductor and flexor tonus of upper extremities. Extensor and adductor posture is dominated in the legs. For this reason, the leg is swung in a wide, lateral arc to move it forward since the patient cannot be the ankle and knee

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Spastic gait: It is seen in cerebral palsy. It is caused by bilateral involvement of pyramidal pathways. The tonus of the extensor and adductor muscles in the legs is increased. The patient cannot curl the legs while walking and drags the feet.

Steppage gait: The patient is unable to dorsiflex his/her foot and lifts the advancing foot higher than needed to avoid dragging the toes while walking. When the patient step forward, toes clear the ground. This is also called steppage gait and resembles to horse gait.

Parkinson's Disease: Gait and posture is impaired due to changes in **muscle** tone and impairments in automatic movements and postural adjustments. The patient walks slowly with small steps in a forward flexed walking posture. Associated arm swing disappears. The patients fails to swing the arms while walking and keep them close to trunk. In the initial phase of Parkinson's disease that the disease is involving one side, swinging one side of the arm more than the other is of particular diagnostic importance.

Tandem walking: The patient keeps the feet apart while standing in order to increase surface area. If the feet are put together, the patient fails to maintain his balance and even he/she can fall. Open or closed eyes do not change this condition. Walking is unbalanced. The patient stumbles while walking resembling to drunk walk. The patient is not able walk on a straight line. The patient cannot walk and strike the heels. This occurs in disorders of cerebellum and connections of central nervous system.

Aphasia, apraxia, agnosia

Phonation: It is the process of producing sounds and a function of larynx; its dysfunction is called dysphonia. **Articulation:** Transforming the sounds to syllables and words. It is a function of muscles and organs innervated by medullary nerves achieved by coordinated movement of larynx, pharynx, palate, tongue, jaw and lips. **Dysarthria** occurs in its disorder.

APHASIA

Aphasia is an impairment of language ability occurring after speech learning but which is not caused by a psychiatric problem or an impairment at muscle level

In this regard, aphasia involves a disruption in language ability that includes understanding, expressing or both.

Motor aphasia (Broca's aphasia): The patient well understands what is being said but his/her speech is not fluent; the patient speaks timid with slow and incomprehensible words. Repetition and naming are also corrupted. (Broca's centre - 44th area) is close to the motor cortex and therefore it is often accompanied by right hemiparesis.

Sensory aphasia (Wernicke's aphasia): It is extremely hard to understand; patient speaks fluently but the content is incorrect and meaningless. Repetition and naming are also corrupted. Patient is not aware of his/her disease. (The lesion is located in Wernicke's area; Brodman area 22)

Global aphasia: There are large lesions involving both areas

Agnosia

An inability to recognize something that was previously learnt with a particular sense in the absence of a defect in a specific sense.

Autotopagnosia: The patient does not recognize one half or one part of his/her body and does not have knowledge about his/her own body. Even they can argue that the body part belongs to someone else.

Anosognosia i: The patient is not aware of the neurological defect. For example, the patient does not admit that he/she has hemiplegia. In cases with severe anosognosia, even if the paralyzed arm and leg clearly manifested, they continue to deny that.

APRAXIA

Loss of ability to execute a purposeful movement in the absence of sensory or coordination defect in a conscious patient with normal comprehension is called apraxia

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Ideomotor apraxia: If the patient is prompted to make a salute or wipe the nose, he will not able to do it. However, the same movements can be made automatically.

Ideational apraxia: If the patient is asked to grab a cigarette from his package and fire it up with a match, he/she will able to do every part correctly but with mistakes in sequences.

Constructional apraxia: The patient cannot draw a flower, cannot draw the Turkey's map and locate basic cities on the map and the patient cannot form the requested shape by putting together the toy blocks.

Dressing apraxia: The patient fails to wear a jacket or pants, or cannot turn inside out.

COMA

Consciousness refers to being awake and aware of himself and the environment.

Somnolence (lethargy): The patient tends to fall asleep. They wake up and and give correct answers to voice stimuli. But they become somnolent when left alone.

Stupor: No response to verbal stimuli. You must apply a strong stimulus to establish a connection. The patient opens his eyes with repeated stimuli. Meanwhile, he is unable to fulfill verbal commands or order slowly and inadequately.

Coma: The patient cannot be evoked with external stimuli. In mild and moderate come, the patient localizes and tries to withdraw painful stimuli. Or gives a general response such as grimace. In deep coma, there is no response even at a reflex level to any stimuli. Only vegetative functions are preserved.

MUSCLE POWER EXAMINATION GUIDE

NO	STEPS
1.	Giving patient information about the examination and asking the patient to lay down the examination table
2.	Prompting patient that "he is expected to force against physician's muscle power"
3.	Abduction-adduction of the shoulder: Forcing against physicians while moving the patient's arm up and down from the shoulder joint
4.	Flexion-extension of arm: Patient attempting to bend his elbow towards himself (flexion) while forcing against physician's power. Comparison with the contralateral elbow flexion and grading. Same action is repeated for elbow extension
5.	Handgrip: Physician places his 4 fingers vertically into the patient's hand and the patient is asked to clasp the physician's hand strongly; same test is performed in the other hand and muscle power is noted
6.	Evaluation of the power of thigh muscles during hip flexion (the patient withdraws the legs towards the abdomen) and extension (patient suppresses his legs downward)
7.	Evaluation of leg muscle strength during knee flexion and extension
8.	Having the patient lay down. Evaluation of muscle strength during dorsal flexion (upward) and plantar flexion (downward) of the ankle
9.	Mingazzini's test: While the patient is lying, he is asked to withdraw his thighs to abdomen at an angle of 90 degrees (flexion) and keep the knees bent at a 90 degrees angle; he is asked to maintain this for 2 minutes. In the meantime, if the leg falls earlier, it must be noted which leg fell in how many seconds
10.	Patient's gait. Is the patient bearing more weight on one side while walking or is there any asymmetry, all must be checked

Muscle strength of the patients are graded
 5 / 5: Full muscle strength
 4 / 5: Lifting against gravity but not a full
 3 / 5: Lifting against gravity but cannot fo
 2 / 5: Cannot lift against gravity but move
 1 / 5: Cannot move the joint but muscle co

NEUROLOGICAL EXAMINATION - MOTOR EXAMINATION SKILLS

STEPS
Preparation for the examination
Introduced him/herself to the patient and requested to examine him/her
Moved to the right side of the patient while the patient was lying on the bed (the patient can be sitting on his/her bed)
I. Nervus olfactorius examination skills
1 Blocked the patient's nostril with his/her finger
2 Held against the open nostril a scented cotton or material (i.e. coffee, mint, lemon) and asked the patient to smell and tell what they were.
3 The same was applied to the other nostril.
II. Nervus opticus examination skills
<i>Visual acuity:</i>
1 In a bright room, he/she asked the patient to close the left eye with the left hand and recorded the smallest letter on the reading chart that the patient was able to read.
2 The same test was applied to the other eye.
3 If reading chart is not available or if the patient cannot read, he/she asked the patient to count his fingers at a distance of 5 m. He recorded from which distance the patient counted the fingers.
<i>Visual field:</i>
1 He/she moved 60 cm far and faced the patient.
2 He/she asked the patient to close his/her left eye with the left hand and asked him to say when he/she sees the finger while moving it from nasal, temporal, superior and inferior to midline.
3 The same test was applied to the other eye.
4 He/she recorded the visual field of both eyes.
<i>Fundus examination:</i>
1 Under a soft light, he/she asked the patient to look steadily to a fixed point at the front.
2 By introducing ophthalmoscope laterally with an angle of 15 degrees, he/she examined fundus of the right eye with his/her right eye and fundus of the left eye with his/her left eye.
III. Nervus oculomotorius
IV. Nervus trochlearis
VI. Nervus abducens examination skills

1 He/she faced the patient. He/she checked for ptosis, deviation of eye and if the pupils are equal.
Light reflex:
1 While holding the light source against one eye, he/she checked if there is myosis in that eye and in the opposite eye.
2 The same test was applied to the other eye.
Eye movements:
1 He/she asked the patient to follow his/her index finger with their eyes while moving the finger to the right, left, up, down and to oblique direction.
2 He/she assessed if the eye movements are conjugated.
V. Nervus Trigemini (n. ophtalmicus, n. Maxillaris, n. mandibularis) examination skills
Sensory examination:
1 He/she touched forehead, upper jaw and lower jaw with a wisp of cotton and asked the patient whether he/she feels.
2 He/she performed the test simultaneously to the both sides of the face and asked the patient to compare.
3 Corneal reflex: While the head is in neutral position, he/she asked the patient to gaze at right side and touched the cornea of the left eye with a wisp of cotton. He/she noted if there is involuntary blinking of the eyelids.
4 Then, he/she repeated the test to the other eye.
Motor examination:
1 He/she asked the patient to tighten the jaw; he/she palpated the masseter muscle and compared their tones.
VII. Nervus facialis examination skills
1 He/she asked the patient to close the eyes and noted the closure of both palpebrae.
2 He/she asked the patient to smile and noted the retractions of mouth corners (nasolabial groove).
VIII. Nervus vestibulocochlearis examination skills
1 <i>Hearing</i> : He/she closed the ears of the patient respectively and whispered to the other; he/she asked the patient to say if they hear.
2 <i>Rinne's test</i> : He/she placed a vibrating diapason on the patient's mastoid bone. When the vibration cannot be noticed, he/she brought the diapason to the front of the external ear canal and noted the time the patient noticed the vibration.
3 <i>Weber's test</i> : He/she placed the diapason on the middle of the forehead and asked the patient by which ear he/she hears the vibration.

IX. Nervus glossopharyngeus
X. Nervus vagus examination skills
1 He/she asked the patient to say "Aaa" loudly and checked with the help of a light source if palatal arcs are elevating equally.
2 <i>GAG reflex</i> : He/she noted if gagging is triggered while touching posterior wall of the pharynx with a tongue depressor.
XI. Nervus accessorius examination skills
Musculus sternocleidomastoideus:
1 He/she asked the patient to turn the head to one side and palpated the opposite muscle.
2 The same test is also applied to the other muscle.
Musculus trapezius:
1 He/she asked the patient to raise the shoulder and force against him/herself.
2 He comparatively recorded the strength of both muscles.
XII. Nervus hypoglossus examination skills
1 He/she asked the patient open the mouth. He/she evaluated with inspection if there is tongue atrophy.
2 He/she asked the patient to push the tongue out and move it right to left.
3 He/she noted if there is deviation of the tongue to one side.

Date and time

Identity information (Name, age, sex, marital status, occupation, social security, address)

Taken from?

Target: Evaluation of muscle and skeletal system

GENERAL INFORMATION

I. TOPICS TO KNOW:

1-anatomy and physiology of the musculoskeletal system

2-normal inspection methods and techniques, inspection, palpation

3-joint movements; supination, pronation - flexion, extension - dorsiflexion, plantar flexion - inversion, eversion - radial deviation, ulnar deviation - abduction, adduction - internal and external rotation

II. TOPOGRAPHICAL ANATOMY: Hand - Wrist, Shoulder (Glenohumeral joint, Sternoclavicular, acromioclavicular joint, biceps), Ankle (Achilles tendon, tibiotalar joint), knee (patella, patellar tendon, Quadriceps muscle, suprapatellar pouch), Hip joint, spina iliaca anterior superior, spinous protrusions.

III. PHYSICAL EXAMINATION

See neurologic examination guide for further information about motor/sensory examination of the extremities.

General approach

- For this examination, the patient should be adequately undressed.
- Some parts of the examination may not be appropriate to the clinical situation (for example, examining range of motion in a broken extremity).
- Examination of the musculoskeletal system completely relates to the anatomy. While taking history and performing physical examination, consider anatomical structure.
- Cardinal signs of musculoskeletal diseases are pain, redness (erythema), swelling, warmth, deformity and loss of function.
 - In all regions, start examination from inspection, palpation and range of motion. Special tests are applied if a particular musculoskeletal system pathology is suspected. A full examination also includes neurological assessment of the affected region.

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Inspection

1. Look for scars, rashes, redness, asymmetry, deformity, swelling or atrophy.
2. Always compare with the other side.

Palpation

1. Sequentially examine each joint and muscle group.
2. Determine if there is tender area.
3. Determine if there is swelling, warmth.
4. Always compare with the other side.

Range of motion (ROM)

Start with active ROM (the joints are moved by the patient). If active ROM is abnormal, examine passive ROM (joints are moved by the examiner).

Active

1. Ask patient to move each joint through his/her maximum ROM.
2. If there is limitation, note the degree and type (pain, weakness, etc).
3. Note the increase in ROM or instability.
4. Always compare with the other side.
5. If there is abnormality, switch to passive ROM.

Passive

1. Tell the patient to relax and allow supporting the examined extremity. Gently move each joint through maximum ROM.
2. If there is limitation, note the degree and type (pain or mechanical).
3. If ROM is increased, apply special tests for instability.
4. Always compare with the other side.

Example Joint Examinations

Wrist and Hand

1. Inspection: Inspect the hand and wrist from palmar and dorsal aspects and check if there is redness, swelling, nodule, deformity or atrophy. Evaluate if the patient can flex the fingers.
2. Palpation: Using dorsal aspect of your fingers, first check if there is warmth in the joints. Then, fixate the patient's wrist with one hand and palpate proximal interphalangeal joints and distal interphalangeal joints using the thumb and index finger of the other hand. To investigate the sensitivity of the metacarpophalangeal joints, grip the patient's hand from two sides with one hand. Then, place your both thumbs on the dorsum of the patient's hand and index fingers on the palms, and palpate all metacarpophalangeal joints between your thumbs and index fingers. Check the tenderness and swelling in the joints while palpating.
3. Range of joint motion: Test flexion, extension, ulnar and radial deviation of the wrists, and flexion, extension, abduction and adduction of all fingers. Test opposition of thumb, supination and pronation of forearm.

Shoulder

1. Inspection: Observe the shoulder looking from the back and front, explore for the presence of swelling, deformity and muscle atrophy.
2. Palpation: Palpate Glenohumeral joint, Sternoclavicular and acromioclavicular joints, and biceps muscle.
3. Range of joint motion: Test lifting the arm forward (flexion); and backward (extension), test internal and external rotation, abduction and adduction.

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Knee

1. Inspection: Note if there is deformity, swelling or quadriceps atrophy.
2. Palpation: Palpate suprapatellar pouch and the edges of the patella for the presence of swelling, tenderness and warmth.
3. Range of joint motion: Ask the patient to perform knee flexion and extension.
4. Push and move the patella towards femur, check for tenderness. Test the stability of the joint with varus, valgus, anterior drawer and posterior drawer tests.

Hip

1. Inspection: Check for deformity and postural disorders.
2. Measure and compare the length of both lower extremities, "between spina iliaca anterior superior - medial malleolus".
3. Range of joint motion: While the patient is lying, ask the patient to hold his/her legs and pull them towards the chest (flexion), flex the hip and knee at an angle of 90° and evaluate internal and external rotation. Place one hand on the contralateral spina iliaca anterior superior to stabilize pelvis; hold the ankle with the other hand and test abduction by moving the leg laterally and test adduction by moving the leg towards the contralateral extremity. Ask the patient to lay down and extend his thigh upwards (extension).

Lumbar Spine

1. Inspection: Observe the patient looking from the back and side while the patient is standing. Note the spinal curvature, shoulder and hip asymmetry.
2. Palpation: Palpate vertebral spinous processes with your thumb while the patient is standing or sitting. Check the paravertebral muscles for tenderness and spasm.
3. Waist Range of joint motion: Ask the patients to bend forward and touch the toes without bending the knees (flexion). While stabilizing the pelvis with your hands, ask the patient to bend laterally (lateral flexion) and backward (extension) and twist at the waist to the left and right (rotation).

Joint and Spine Examination Skill

HAND - WRIST EXAMINATION SKILL	
NO	STEPS
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	He asked the patient to have a seat on the examination table.
4.	He confronted the patient.
5.	He inspected the hand and wrist from palmar and dorsal aspects and checked if there is redness, swelling, nodule, deformity or atrophy.
6.	He tested if the patient can flex the fingers.
7.	Using dorsal side of the fingertips, he checked if there is warmth in the joints.
8.	4. He fixated the patient's wrist with one hand and palpated proximal interphalangeal joints and distal interphalangeal joints in a respective order using the thumbs and index fingers of the other hand.
9.	Then, he palpated each metacarpophalangeal joint of the patient using his thumbs and index fingers.
10.	He tested flexion, extension, ulnar and radial deviation of the wrists, and flexion, extension, abduction and adduction of all fingers.
11.	He evaluated opposition.
12.	He evaluated supination and pronation of the forearm.
13.	He recorded his findings during inspection and palpation and range of motion of the joints.
14.	He washed his hands.

SHOULDER JOINT EXAMINATION SKILL	
NO	STEPS
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	He asked the patient to have a seat on the examination table.
4.	He confronted the patient.
5.	He asked the patient to undress as to expose his/her shoulders.
6.	He observed the shoulder looking from the back and front, and explored for the presence of swelling, deformity and muscle atrophy.
7.	He palpated Glenohumeral joint, Sternoclavicular and acromioclavicular joints, and biceps muscle.
8.	He tested lifting the arm forward (flexion); and backward (extension), and tested internal and external rotation, abduction and adduction.
9.	He observed the shoulder looking from the back and front, and explored for the presence of swelling, deformity and muscle atrophy.
10.	He palpated Glenohumeral joint, Sternoclavicular and acromioclavicular joints, and biceps muscle.
11.	<i>He recorded his examination findings while palpating the joints.</i>

KNEE JOINT EXAMINATION SKILL	
NO	STEPS
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	He asked the patient to lay down on the examination table.
4.	He asked the patient to undress as to expose both knees and thighs.
5.	He moved to the right side of the patient.
6.	He noted if there is deformity or swelling in knee joint or quadriceps atrophy.
7.	He palpated suprapatellar pouch and the edges of the patella for the presence of swelling, tenderness and warmth.
8.	He asked the patient to perform knee flexion and extension.
9.	He pushed and moved the patella towards femur, and checked for tenderness.
10.	He tested the stability of the joint with varus, valgus, anterior drawer and posterior drawer tests.
11.	He recorded his examination findings while palpating the joints.

HIP JOINT EXAMINATION SKILL	
NO	STEPS
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	He assessed the patient's gait and the deformities in lower extremity.
4.	He asked the patient to lay down on the examination table.
5.	He moved to the right side of the patient.
6.	He measured the length of both lower extremities. (Between spina iliaca anterior superior - medial malleolus)
7.	He asked the patient to hold his right leg and pull towards his chest and he evaluated flexion angle.
8.	While the patient's hip and knee were flexed at an angle of 90 degrees, he fixated the thigh of

	the patient with one hand and held the right ankle with the other hand and evaluated internal and external rotation of the right hip.
9.	He fixated pelvis by pressing on the patient's left spina iliaca anterior superior with one hand. He held the ankle with one hand, he evaluated abduction by moving the leg laterally and tested adduction by moving the leg medially towards the contralateral extremity.
10.	He repeated the steps 6, 7 and 8 on the other side.
11.	He asked the patient to lay on the examination table face down.
12.	He pressed over the sacrum of the patient with one hand while lifting the patient's thigh upwards to evaluate hip extension.
13.	He repeated step 11 on the other side.
14.	He recorded the measurements of joint range of motion.
15.	He gave patient information about the measurements.
16.	He washed his hands.

LUMBAR SPINE EXAMINATION SKILL	
NO	STEPS
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	He asked the patient to stand up.
4.	He evaluated physiologic cervical, thoracic and lumbar curvatures by looking from the side.
5.	He examined deformities and curvatures of the spine and if there is an asymmetry in shoulders and hips by looking from back.
6.	He palpated spinous protrusions of each vertebra and paravertebral muscles using his thumbs.
7.	He asked the patient to bend forward and try touching the toes without bending the knees and he evaluated lumbar flexion.
8.	He stabilized the patient's pelvis with both hands and asked the patient to bend laterally to the left and right, and he evaluated lumbar lateral flexion.
9.	He stabilized the patient's pelvis with both hands and he evaluated right and left lumbar lateral rotations.
10.	He stabilized the patient's pelvis with both hands and he evaluated lumbar extension.
11.	He recorded the measurements of joint range of motion.
12.	He gave patient information about the measurements.
13.	He washed his hands.

URINARY TRACT EXAMINATION GUIDE

Date and time

Identity information: (Name, age, sex, marital status, occupation, social security, address)

Taken from?

Chief complaints: Dysuria, hematuria, frequent urination, incontinence, nocturia, pain

History of the current illness

1.Characteristics of the symptoms

Dysuria:

- **Localization:** At urethral orifice, suprapubic
- **Character:** Pain or burning, urine color, blurred-clarity, smell
- **Severity:** Mild, moderate, severe
- **Timing:** When it began, during urination, at the end
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency and progression:** Intermittent, continuous, progressive
- **Precipitating or aggravating factors:** Coitus, constipation, urine retention for a long time, taking less liquid
- **Alleviating factors:** Increased fluid intake, hot application
- **Accompanying symptoms:** Frequent urination, fever, back pain, hematuria, nocturia, vaginal discharge

Hematuria:

- **Character:** At the beginning of urination, in the end, or throughout urination, with blood clots, light red, the color of beef broth
- **Severity:** mild, severe, moderate
- **Timing:** When it began and for how long does it continue
- **Onset:** Sudden, slow
- **Acute Chronic:**
- **The frequency and progression:** Intermittent, continuous, progressive
- **Precipitating or aggravating factors:** Exercise, passing stones, drug use
- **Alleviating factors:** Rest, fluid intake
- **Accompanying symptoms:** Dysuria, back pain, fever

Frequent urination:

- **Timing:** When it began, day-night difference
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency and progression:** How many times a day, intermittent, continuous, progressive
- **Precipitating or aggravating factors:** Abundant fluid intake
- **Alleviating factors:** Rest, coitus restriction
- **Accompanying symptoms:** Dysuria, sudden need for urination, hematuria, urinary incontinence, nocturia, drinking plenty of water, eating a lot

Urinary incontinence:

- **Severity:** Amount
- **Timing:** When it began, duration, day and night difference
- **Onset:** Sudden, slow
- **Acute Chronic:**
- **The frequency and progression:** How many times a day, intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Heavy lifting, laughing, with sneezing, neurological diseases, use of diuretics
- **Accompanying symptoms:** Dysuria, pollacuria, nocturia, sudden need for urination, stool incontinence, difficult urination

Nocturia:

- **Timing:** Onset, duration
- **The frequency and progression:** Intermittent, continuous, progressive, how many times in a night
- **Precipitating or aggravating factors:** Fluid intake, heart failure, drugs
- **Accompanying symptoms:** Dysuria, frequent urination, drinking plenty of water, eating a lot, lower limb edema, difficult urination, diminished urine flow in men

Pain:

- **Localization:** Lumbar, suprapubic, inguinal
- **Radiation:** Testis, inguinal region, labia
- **Character:** Blunt, stabbing, colic
- **Timing:** When it has begun, duration
- **Onset:** Sudden, slow
- **Acute-chronic:**
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Movement, the amount of fluid intake
- **Alleviating factors:** Heat application, position
- **Accompanying symptoms:** Nausea, vomiting, dysuria, hematuria, fever

Ongoing internal, surgical or psychiatric problems that might affect chief complaints

Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

Significant positive and negative observations

Past medical history

Passing stone, pyelonephritis

Current health status

Family history

Personal and social history

Examination of Organ Systems

ASSESSMENT OF URINARY TRACT EXAMINATION SKILLS

Purpose: Acquisition of skills in urinary tract examination	
STEPS	
1.	Giving patient information about the examination
2.	Asking the patient to lie on his/her back, undressing and moving to the right side of the patient
3.	Inspection of the abdomen by dividing it into 9 or 4 quadrants
4.	Palpation of the right kidney: While the patient is lying, left hand is placed to waist of the patient just below and in parallel to 12th costa as the finger tips are about the reach costovertebral angle
5.	Placing the right hand to the right upper quadrant just lateral to and in parallel to rectus muscle
6.	Attempting to lift the kidney above with the left hand
7.	The patient takes a deep breath in and at maximum inspiration pressing with the right hand while attempting to grasp the kidney with both hands
8.	Evaluation of kidney consistency, shape, size, tenderness, etc. (Usually the normal kidney is not palpable)
9.	Palpation of the right kidney: The patient turns his/her left side, following the steps defined in right kidney examination to palpate the kidney with the left hand above while supporting with the right hand below
10.	Exploring if there is tenderness on the projection of ureter
11.	Auscultation of abdominal aorta and renal arteries, exploring the presence of murmur
12.	Bladder palpation and percussion. (Dullness to percussion, searching for Glob vesicale)
13.	Testing for costovertebral angle tenderness (For this: Tapping the costolumbar angle with the ulnar side of the hand)

DIGITAL RECTAL EXAMINATION SKILL

	STEPS
1.	Giving patient information about the examination
2.	The patients stands and bends forward over his/her knees, sims (the patient lies over their side and pulls the legs to the abdomen) position
3.	Wearing gloves on both hands
4.	Examination of anal area while spreading the buttocks apart. (Presence of hemorrhoids, fistula are evaluated)
5.	The physicians lubricates his index finger and introduces it to the anus and slips the finger into the rectum after anal sphincter is relaxed.
6.	Assessment of anal sphincter tone.
7.	The index finger pulp rolls over the prostate at the anterior surface in order to evaluate the consistency and size of the prostate. (Checking for the presence of nodules, induration, asymmetry, and hardness.)
8.	The finger is extended further beyond the prostate to evaluate seminal vesicles
9.	Prostate massage: Where required, milking prostate from lateral and posterior sides to the midline to ensure flow of the sections into prostatic urethra.
10.	Examination of the rectum circumferentially to check for palpable rectal mass and evaluation of the stool content in the rectum.
11.	The patient is asked to dress

MALE GENITAL SYSTEM EXAMINATION GUIDE

Department

Date:

Date and time

Identity information: (Name, age, sex, marital status, occupation, social security, address)

Chief complaints: Erectile dysfunction, ejaculation disorder, penile discharge or lesions
infertility, swelling in the inguinal region, swelling of the scrotum, palpable mass in the testis

History of the current illness

1. Characteristics of the symptoms

Erectile dysfunction:

- **Character:** Total absence, painful-prolonged, painless prolonged, bending of the penis during erection
- **Timing:** The time it has begun, duration, are the morning erections present or not
- **Onset:** Sudden-slow
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Coitus, masturbation, relationship with erotic material, with all sexual partners or with all partners, drugs (diuretics, sedatives, antihypertensives, tranquilizers, estrogen, drugs that inhibit the synthesis of androgen), alcohol use, fatigue, stress, chronic disease (diabetes mellitus, hypertension and atherosclerotic heart disease)
- **Alleviating factors:** Drug use
- **Accompanying symptoms:** Premature ejaculation, depression, anxiety

Ejaculation disorder:

- **Character:** Painful or painless, the color, odor, consistency and volume of the ejaculate
- **Timing:** When it began and for how long does it last for
- **Onset:** Sudden, slow
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Psychological conditions, drugs
- **Alleviating factors:** The use of condoms, drugs
- **Accompanying symptoms:** Urinary complaints (dysuria, etc.), erectile dysfunction

Discharge from the penis or lesion:

- **Character:** Lesion; swelling, ulcers, redness, single or multiple,
Discharge; color, odor, consistency, amount
- **Timing:** When it began (suspicious sexual intercourse) and for how long does it last for
- **Onset:** Sudden, slow
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Sexual intercourse, drug use,
- **Alleviating factors:** Lesion: the use of condoms
- **Accompanying symptoms:** Dysuria, back pain, fever, swelling in the testis, pain

Infertility:

- **Character:** Primary or secondary
- **Timing:** For how long do the family attempt to have a child
- **Accompanying symptoms:** Erectile dysfunction, whether or not ejaculation is present, undescended testis, varicocele (scrotal swelling), problems in his wife related with infertility

Lump in the inguinal region:

- **Character:** Whether or not it is reduced, its size, mobility, shrinking and enlarging, redness-together with pain, soft or hard
- **Timing:** When it has begun, duration
- **Onset:** Sudden-slow
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Straining, standing for a long time, heavy lifting
- **Alleviating factors:** Rest, the use of corset
- **Other associated symptoms:** Pain, nausea, vomiting

Swelling of the scrotum

- **Character:** Being painful or not, enlarging and shrinking, hard-soft, mobility
- **Timing:** When it has begun, duration
- **Onset:** Sudden-slow
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Straining, heavy lifting, urinary infections
- **Alleviating factors:** Rest, the use of drugs
- **Other associated symptoms:** Dysuria, urethral discharge, pain

Ongoing internal, surgical or psychiatric problems that might affect chief complaints

Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

Significant positive and negative observations

Past medical history

Adult diseases / hospitalization (passing stone, pyelonephritis)

Family History**Personal and social history****Examination of Organ Systems****GENERAL INFORMATION****GENERAL APPROACH**

Each step of the examination should be explained to the patient and the patient must be assisted to relax. Rarely, erection can occur during the examination. The patient is told that this is a normal situation and the examination is continued. If the patient wants you to cease the examination, this request is accepted.

A good genital examination can be done while the patient is standing or in supine position. The patient's chest and abdomen should be covered.

EVALUATION OF SEXUAL DEVELOPMENT

The size and shape of the penis and testicles, color and smoothness of the scrotal skin and distribution of pubic hair are used to evaluate sexual development. The size of the testicles are assessed by palpation.

PENIS Inspection:

- **Skin:** It must be checked if there is exfoliation or inflammation in the penile skin.
- **Prepucium (foreskin):** If present, it is retracted or the patient is asked to pull it back.
- **Glance:** Check for any ulcer, scar, nodule or signs of inflammation. Cheesy whitish material called smegma can be observed just beneath the foreskin.
- **Localization of the urethral orifice** must be evaluated. After pinching the glance between two fingers, urethral orifice must be exposed and checked for discharge. Normally, there is no discharge. If the patient says that he has discharge but if it is not apparent, stroke the penis from the base to the top. This maneuver will make an amount of discharge come out. Microscope slide and culture material must be made available beforehand.

Palpation: The penis is palpated and checked for the presence of any tenderness or fibrous plaque.

SCROTUM AND TESTES

Inspection Skin: Scrotum is lifted to visualize back surface.

Scrotal contours: It is checked for the presence of a lump of mass.

Palpation Both testes and epididymis are palpated by pinching them between the index finger and thumb. They are evaluated in terms of their size, shape, density and the presence of tenderness. Normally, applying pressure on the testes causes deep visceral pain.

Both spermatic cords and vas deferens are palpated with two fingers from epididymis to superficial inguinal canal. It is checked for the presence of a nodule or fuzziness.

Any lump in the scrotum must be assessed by transillumination. After turning off the lights in the examination room, a strong light source is held behind the mass and its light transmittance is evaluated. Lumps containing serous fluid such as hydrocele show transillumination.

MALE GENITAL SYSTEM EXAMINATION SKILL

STEPS	
1.	He washed his hands.
2.	Informed the patient about examination and advised to stay relaxed.
3.	Asking the patient to undress as to expose his genital organs and covering the abdomen and chest of the patient.
4.	Wearing gloves on both hands
5.	Inspection, for this;
6.	<i>Observation of pubic hair (the distribution, quantity)</i>
7.	Observation of the skin around and at the base of the penis (exfoliation, inflammation, swelling, etc.).
8.	Observation of scrotum (edema, hyperemia, etc.).
9.	If the penis is not circumcised, pull back the foreskin.
10.	Observation of glans penis and localization of urethral meatus.
11.	Gently pinching the glans between the thumb and index finger and checking for the presence of discharge.
12.	If the foreskin was pulled back, pushing it back to its original place.
13.	Palpation, for this;
14.	Palpation of the penile body between the thumb and index finger from radix to the top of the penis.
15.	Palpation of testes, epididymis and vas deferens in a respective order by pinching the scrotum between the thumb, index and middle finger.
16.	Leaving the patient for dressing.

Date and time**Identity information:** (Name, age, sex, marital status, occupation, social security, address)**Taken from?****Chief complaints:** Abnormal bleeding, pain, vaginal discharge, urinary incontinence**History of the current illness**

1. Characteristics of the symptoms

Abnormal bleeding:

- **Character:** Light blood, clotted
- **Severity:** Number of used vaginal tampons/pads in 24 hours
- **Timing:** When it has begun, its duration, relation with menstruation (shortening (below 21 days) or prolongation (longer than 35 days) of the time between the two menstrual bleeding (below 21 days), amenore, prolonged bleeding (longer than 7 days), bleeding between menstrual periods, relationship with menopause
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency, progression:** The course after onset, progressive, intermittent
- **Precipitating, aggravating factors:** sexual intercourse, stress
- **Alleviating factors:** Drugs
- **Accompanying symptoms:** Pain, cramping, abdominal distension, pelvic fullness, change in stool passage, weight loss or gain

Pain:

- **Localization:** In the abdomen, groin, unilateral or bilateral
- **Radiation:** To leg, waist
- **Character:** Stabbing, dull, sharp
- **Severity:** Mild, moderate, severe
- **Timing:** The time it has begun, how long does it last for after it starts, relationship with menstrual period
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Sexual intercourse, walking up stairs, passing stool, gas passage
- **Alleviating factors:** Drugs, rest
- **Accompanying symptoms:** Vaginal discharge or bleeding, gastrointestinal symptoms, abdominal distension or tenderness, pelvic fullness, menstrual irregularities and decrease or increase in the amount of menstrual bleeding

Vaginal discharge:

- **Character:** Changes in the color, odor and consistency
- **Severity:** Amount
- **Timing:** The time it has begun, how long does it last for after it starts, relationship with menstrual period
- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Cotton or air-permeable underwear, tight jeans or pants, vaginal shower
- **Alleviating factors:**
- **Accompanying symptoms:** Itching, tenderness, inflammation or bleeding in external genitalia, dyspareunia, dysuria or burning while urinating, abdominal pain or cramping, pelvic fullness, discharge or the presence of other symptoms in sexual partner

Urinary incontinence:

- **Character:** With straining or coughing, sudden and with tingling, in the form of an overflow,
- **Severity:** Amount
- **Timing:** The time it has begun, how long does it last for after it starts, at reproduction age or post-menopausal

- **Onset:** Sudden-slow
- **Acute-chronic:**
- **The frequency, progression:** Intermittent, continuous, progressive
- **Precipitating, aggravating factors:** Cold, standing, laughing, straining
- **Alleviating factors:** Drugs, frequent urination
- **Accompanying symptoms:** Constipation or stool incontinence

Ongoing internal, surgical or psychiatric problems that might affect chief complaints

Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

Significant positive and negative observations

Past medical history

Obstetric / gynecological history:

Menstrual History:

- Age at menarche
- Date of last menstrual period (first day of the last cycle)
- Menstrual cycle and how many days does menstruation last for
- Character of the bleeding: The amount (the number of used vaginal tampons or pads within 24 hours), duration, presence of clot
- Dysmenorrhea: characteristics, duration, frequency (whether or not occurs in each cycle)
- Bleeding or spotting between the cycles: The amount, duration, frequency, relationship with the phase of menstrual cycle
- Pain between cycles: The severity, duration, onset, relationship with ovulation
- Premenstrual symptoms: headaches, weight gain, edema, breast tenderness, irritability, or changes in mood, frequency (does it occur in every cycle?), interference with daily activities

Obstetric History:

- Gravida (G): (Number of pregnancies)
- Parity (P): (number of births): term-preterm
- Number of miscarriages (A): spontaneous or induced
- The number of live births
- Pregnancy, birth, miscarriage, fetal or neonatal complications

Menopausal History:

- Age at menopause
- Associated symptoms: menstrual changes, changes in mood, strain, hot flashes
- Post-menopausal bleeding
- Premenopausal birth control methods
- Drugs: HRT and its side effects: breast tenderness, vaginal bleeding, etc.

Gynecological History:

- Previous gynecological procedures: tubal ligation, hysterectomy, oophorectomy, laparoscopy, cryosurgery, conization
- Sexually transmitted diseases
- PID
- Vaginal infections,
- Diabetes Mellitus
- Cancers of the reproductive system organs

Contraception history:

- Last method used, used for how long, whether or not used correctly, effectiveness, side effects, whether or not satisfied with the method
- Previous methods: duration of use for each, side effects, reasons for dropping off

Vaginal shower:

- Frequency: the time elapsed since the last shower, for how many years vaginal shower is being used
- Shower method
- Whether or not a solution is being used

Reason for showering². Ongoing internal, surgical or psychiatric problems that might affect chief complaints

Current health status

Health screening (previous examinations, cholesterol, etc.). Date of the last pelvic physical examination, date of the last pap smear and its result

Family history

Significant history of a certain illness in family members (indicate on the family tree if necessary):

- Cancers of the reproductive system organs
- Exposure to DES during pregnancy
- Multiple gestations
- Congenital anomalies

Personal and social history

Examination of Organ Systems

RISK FACTORS

CERVICAL CANCER

- Between the ages of 40-50
- Cervical dysplasia, condyloma acuminatum, history of herpes simplex infection
- Having had the first sexual intercourse at an early age
- The patient or her partner having multiple sexual partners
- Smoking
- Multiple pregnancies

OVARIAN CANCER

- Between the ages of 40-60
- Presence of the following in the history:
 - ovarian dysfunction, anovulation, and spontaneous abortions
 - endometrial and breast cancer
- Irradiation to pelvic organs
- Endometriosis
- Family history of ovarian and breast cancer
- Infertility or nulliparity
- Exposure to talc or asbestos

Endometrial cancer

- Post-menopausal
- Premature menarche
- Late menopause
- Infertility or low parity
- Obesity
- The history of hypertension, diabetes, endometrial hyperplasia, liver disease,
- Unopposed estrogen replacement therapy
- High socio-economic status
- Family history of endometrial, breast and colon cancer

GENERAL INFORMATION

I. TOPICS TO KNOW: 1 - Female genital system anatomy and physiology

2-Normal examination methods and techniques, inspection, palpation

II. TOPOGRAPHICAL ANATOMY: Mons pubis, labia major and minor, introitus, vagina, cervix, uterus,

Adnexa, Perineum, rectum

III. PHYSICAL EXAMINATION

GENERAL APPROACH

- The patient should be given an appropriate clothing and coverings should be used.
- The patient's bladder should be empty.
- Use non-sterile gloves. If you intend to perform rectal or rectovaginal examination, wear double gloves on your examining hand.
- Dirty tools and materials should be removed from the environment properly.
- Regardless of the sex of the physician, a female assistant must accompany him/her during examination.
- The patient must be explained of the methods to be applied beforehand.
- Appropriate positioning:

The patient is asked to lay down the examination table with the head raised 30-35 degrees.
The patient is assisted while placing her legs on the gynecological examination table. Table is adjusted to provide convenience to the patient.
Shifting the patient's her hips to the tip of the table.
Relieving the patient's knees.

EXTERNAL PHYSICAL EXAMINATION

- **Assessment of the sexual development in an adolescent patient.** Paying attention to the characteristics and distribution of pubic hair and classification according to Tanner stages.
- **Inspection of external genital organs.** Inspection of mons pubis, labia and perineum. Examination of labia minor, clitoris, urethral meatus and vaginal orifice by separating the labiums apart. Checking for the presence of any inflammation, ulceration, discharge, swelling or nodules. Palpation of lesions, if any.

Evaluation of Bartholin glands if there is a history or appearance of labial swelling. Introducing the index finger into the vagina from lower corner of the vagina and placing the thumb to the lower and external part of labium major. Checking for the presence of swelling or tenderness in both sides by switching the fingers. Checking if there is discharge from the glands. Taking culture if there is discharge.

Placing the index finger into the vagina and stroking the urethra gently outward if there is a suspicion for urethritis or the inflammation of paraurethral glands. Checking if there is a discharge from urethral meatus and obtaining culture if there is.

INTERNAL PHYSICAL EXAMINATION

- **Localizing cervix.** Introducing the index finger into the vagina and distinguishing solid and round surface of the cervix. Giving speculum a proper angle will aid localizing the cervix manually. In addition, this will help evaluating the size of vaginal orifice and selecting a proper-size speculum. Water or another lubricant shall be used to lubricate the finger.

• **Checking the vaginal walls.** Labiums are separated with the thumbs and index fingers and the patient is asked to strain. Vaginal walls are checked for the presence of any swelling or nodule.

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• **Placement of speculum.** Selecting a speculum in proper-size and shape. Warm water or other lubricants must never be used since they can affect cytological studies, bacteria or virus cultures. Vaginal orifice can be expanded by pushing the lower part downwards with index and middle fingers. Thus, the speculum will be introduced easier and the patient will be more convenient. Using the other hand, closed speculum is gently introduced into the vagina with an oblique angle tilted downwards. Once the speculum is placed into the vagina, the fingers are withdrawn. Speculum can be used by right hand for easier manipulation. Speculum is rotated in horizontal axis and completely placed into the vagina.

• **Inspection of cervix.** Opening and adjusting speculum to expose cervix. If you have difficulty locating the cervix, speculum is gently pulled back and another attempt is made from a different angle.

Checking cervix and cervical orifice for its color, position, surface properties, ulceration, and for the presence of nodule, mass, bleeding or discharge.

Stabilizing the speculum by tightening its screw.

• **Inspection of the vagina.** Slightly pulling back the speculum in order to examine the vagina. Loosening the screw of the speculum, ensuring that speculum remains open using the thumb. Closing the speculum while paying attention not to pinch off the mucosa. When withdrawing the speculum, vagina must be checked for its color and for the presence of discharge, inflammation, ulceration or a mass.

• **Bimanual examination.** Lubricating the thumb and index finger of the hand with gloves and introducing into the vagina. The thumb should be abducted, and the ring and pinky fingers should be flexed. Vaginal wall as to cover urethral area and anterior aspect of the bladder must be checked for the presence of any nodule or tenderness.

• **Palpation of cervix.** Checking for the position, shape, consistency, regularity, mobility and sensitivity of the cervix. Normally, there is no pain when the cervix is tilted.

• **Palpation of uterus.** Palpating the uterus by placing one hand on the midline of the abdomen between the umbilicus and symphysis pubis while tilting uterus and cervix upwards with the other hand in pelvis.

Palpating the body of uterus by gently sliding the hand in pelvis towards anterior fornix. In this position, the fingers in the pelvis touch the anterior aspect and then hand on the abdomen touch the posterior aspect of the uterus.

If uterus cannot be felt by these maneuvers, uterus may be extroverted. Touching posterior aspect of the uterus with the finger tips by sliding the finger in the pelvis towards posterior fornix. Obese or tight abdominal wall can interfere with palpating the uterus even if it is anteverted.

- **Palpation of ovaries.** Placing one hand on the right-lower quadrant and the other to right lateral fornix. One hand on the abdomen presses inward and downward to depress adnexial structures towards the fingers in the pelvis. Attempting to palpate right ovary or neighboring adnexial structures. By gently moving the hand, rolling the fingers over adnexial structures if possible in order to evaluate their size, shape, consistency, mobility and tenderness. Applying these processes to the left side

Normally, the ovaries are tender to a certain extent. They are palpable in slim women and when the abdominal wall is relaxed; otherwise, it is impossible to feel the ovaries.

- **Rectovaginal examination.** Withdrawing the fingers from vagina, refreshing the lubricant on the gloves. Gently touching vagina with the index finger and touching rectum with the middle finger. Meanwhile, the patient is asked to strain in order to relax the anal sphincter. Explaining the patient that this examination can stimulate bowel passage. Repeating the maneuvers of bimanual examination while giving particular attention to posterior side of the cervix that can only be accessed by the finger in the rectum. Rectovaginal palpation is particularly important to assess retroverted uterus.

Wiping external genitalia and anus after the examination.

PHYSICAL EXAMINATION SKILL WITH SPECULUM

NO	STEPS
1	Ask patient to empty the bladder (*).
2	Provide information to the patient about the examination
3	Ensure that the patient is undressed properly and place coverings.
4	Lay the patient in lithotomy position
5	Wearing gloves on both hands
	Inspect pubic hair and external genital organs.
6	Choose the appropriate speculum.
7	Separate the labia apart using your left hand, introduce the speculum in an oblique angle gently insert into the vagina.
8	While the speculum is in its normal position, speculum handle is rotated 90 degrees and the speculum is advanced inside and slightly downwards and then the speculum blades are opened.
9	Advance the speculum until the anterior blade reaches anterior fornix and posterior blade reaches posterior fornix.
10	Inspect cervix.
11	Check the walls of the vagina while gently withdrawing the speculum.
12	Gently remove the speculum while closing the blades.

(*) These steps are skipped if the examination is performed on a dummy.

Date and Time

Identity information (name, age, sex, marital status, occupation, social security), taken from?

Chief complaints

Bleeding, pain, water breaking, discharge, nausea, vomiting, baby movements, GIT complaints, urinary tract complaints, complaints pertaining to respiratory and cardiovascular systems

History of the current illness

2. Characteristics of the symptoms

Bleeding:

Character: clotted, juicy, abundant, or as a leakage, color,
 Severity: Number of used vaginal tampons/pads within 24 hours
 Timing: When it began, relationship with the last menstrual period and gestational age, duration
 Onset: Sudden-slow
 Acute-chronic:
 The frequency, progression: Intermittent, continuous, progressive
 Precipitating, aggravating factors: coitus, motion
 Relieving factors: rest, coitus restriction
 Accompanying symptoms: abdominal or pelvic pain, blurred vision, seizures, right upper quadrant pain, stiffness and stretching of the abdomen, edema, water breaking

Pain:

Localization: pelvic, abdominal, right upper quadrant, waist
 Radiation:
 Character: dull, squeezing, cramping
 Severity: mild, severe
 Timing: The time it has begun and for how long does it last, relationship with LMP and gestational age
 Onset: sudden, slow
 Acute-chronic:
 The frequency, progression: periodic or continuous, with a constant intensity or progressive
 Precipitating, aggravating factors: coitus, motion
 Relieving factors: rest, coitus restriction
 Accompanying symptoms: bleeding, blurred vision, seizures, right upper quadrant pain, stiffness and stretching of the abdomen, edema, water breaking

Water breaking:

Character: Clear, bloody, with meconium,
 Severity: leakage, abundant
 Timing: When it has begun, relationship with the last menstrual period and gestational age, duration
 Onset: Sudden-slow
 The frequency, progression: Intermittent, continuous, progressive
 Precipitating, aggravating factors: coitus, motion
 Relieving factors: rest, coitus restriction
 Accompanying symptoms: pain, fever, bleeding, abdominal contractions, abdominal tenderness, tachycardia

Discharge:

Character: transparent, color, odor, consistency
 Severity: amount,
 Timing: When it has begun, relationship with the LMP and gestational age, duration
 The frequency, progression: Intermittent, continuous, progressive
 Associated symptoms: dysuria, itching, burning, dyspareunia

Nausea, vomiting:

Character: bloody, bilious vomiting,

Timing: When it has begun, relationship with the LMP and gestational age, duration

The frequency, progression: Intermittent, continuous, progressive, how many times a day, in the morning

Precipitating, aggravating factors: cooking smells, different smells, stress, sour, liquid, fatty foods

Relieving factors: rest, quiet environment, staying away from the odors, diet,

Accompanying symptoms: retching, dizziness, weakness, hematemesis, abdomen being larger than the expected for gestational age, the smell of acetone in the mouth

Baby movements

Localization: right or left side of the umbilicus, etc.

Character: twitching type, kicking

Severity: mild, severe, has never been felt

Timing: When it has begun, relationship with the LMP and gestational age

Frequency:

Precipitating, aggravating factors: eating,

Relieving factors: resting, fasting, sleep

Accompanying symptoms: bleeding, right upper quadrant pain, stiffness and stretching of the abdomen, water breaking

Other symptoms include:

GIT complaints (heartburn, constipation, diarrhea, bleeding gums, tooth decay), urinary tract complaints: dysuria, flank pain, cardiac and respiratory system complaints: palpitations, shortness of breath,

3. Ongoing internal, surgical or psychiatric problems that might affect chief complaints

3. Past history related to the symptom(s)

- Previous treatment? Response? Data from past records?
- What has the patient made about the symptoms?

4. Significant positive and negative observations

5. Psychosocial status of the patient at the onset of symptoms

6. How does the patient recognize the disease, particular reasons/influences/fears

7. The impact of the illness and/or the treatment to the patient's life, work, relations

8. The patient's expectations

9. Reason to see a doctor

10. Preferences of the patient in terms of Interventions to be made in case she dies (this is asked if there is a necessity)

Past Medical History

1. Childhood diseases

2. Vaccination

3. Adult illnesses/hospitalizations:

4. Operations

5. Injuries/accidents

6. Obstetric/gynecological history: blood incompatibility, is there a kin marriage, age at pregnancy,

Last pregnancy, LMP, TST, menstrual cycle, age, is this a planned pregnancy or not? Is there any complication related with the contraceptive method used?, How long before the pregnancy did the patient cease contraception?, Characteristics of the previous pregnancies: EDT, ectopic pregnancy, hypertension, thrombosis, Termination of previous pregnancies: (NSpD, ED, Cesarean section, Miscarriage and Abortion, etc.), Infertility

7. Transfusions

Current health status

1. Drugs

2. Allergies and drug reactions

3. Health screening (previous examinations, cholesterol, follow-up of the last pregnancy, etc.).

4. Diet, sleep, exercise

5. Smoking, alcohol, drugs

6. Cosmetics: spray, powder, perfume, antiseptic soap, etc.

7. Safety precautions: (seat belts, helmet, fire extinguisher, etc.)

Family History

1. Health status of the parents, siblings and children

2. Significant history of a certain illness in family members (indicate on the family tree if necessary):

3. Deaths: dates and ages of death

Personal and Social history

Education and work status (working life, job satisfaction)

Marital status

Living conditions, family structure

Support/secondary gains: Are there any people that you can rely on their help? How will your family and friends react the illness?

Sexual history/activity

Important events of life: deaths, divorce, financial difficulties

Health-related beliefs, tendencies

Examination of Organ Systems

General: General health status (eg: Do you feel yourself healthy or do you think that you have many illnesses?) The usual weight (weight before pregnancy), appetite, recent weight changes, weakness, fatigue, fever.

Skin: Rash: lump, itching, discoloration, nail and hair changes

Head: Headaches

Eyes: Vision, contact lenses or glasses, the last eye examination, pain, redness, excessive tearing, double vision, temporary loss of vision or blurred vision.

Ears: Changes in hearing, feeling of light-headedness, ear pain, infection, discharge and tinnitus.

Nose and Sinuses: Frequent colds, nasal congestion, hay fever, nose bleeds

Mouth and Throat: Status of the teeth and gums, bleeding gums, the last dental examination, painful tongue, frequent sore throat, hoarseness, breathe odor, voice changes, loss of taste or hearing strange sounds.

Neck: Lump in the neck, "swollen glands", neck pain or stiffness.

Breast: Lump, pain, nipple discharge,

Respiratory: Cough, sputum (color, quantity), blood coming with cough, wheezing, asthma, bronchitis, emphysema, pneumonia, pleurisy.

Heart: Shortness of breath: at rest, during exercise or when laying down or awaking after sleeping for a while. Chest pain, rapid or bounding pulse, swelling.

Digestive: Difficulty swallowing, heartburn, nausea, vomiting, blood vomiting, dyspepsia, change in bowel habits, rectal bleeding or black tarry stool, constipation, diarrhea, abdominal pain, food intolerance, excessive belching or gas, hemorrhoids, liver and gall bladder problems, hepatitis, jaundice.

Urine: Frequent urination, increase in the amount of urine, need for urination in normal sleep time, sudden urge for urination, difficulty in initiating urination, urinary incontinence, blood in urine, history of stones.

Reproduction:

Female: In her history

Musculoskeletal: Joint pain and stiffness, arthritis, gout, back pain, muscle pain or cramps.

Peripheral vascular: Leg cramps when walking, varicose veins, thrombophlebitis.

Neurological: Fainting (syncope), seizures, paralysis, local weakness, numbness, tinnitus, tremors, memory.

Psychiatric: Nervousness, agitation, mood, depression.

Endocrine: Thyroid problems, not being able to stand hot or cold, excessive sweating, diabetes, excessive thirst, eating and urination.

Hematologic: Anemia, easy bruising or bleeding

Comments

PHYSICAL EXAMINATION IN PREGNANCY DIRECTED TO SYSTEMS OUTLINES OF THE PREGNANCY

I. Topics to know: 1 - Female genital system anatomy and physiology of pregnancy
2- Normal examination methods and techniques: inspection, palpation, auscultation

II. Topographical anatomy: Quadrants of the abdomen, labia major and minor, introitus, vagina, cervix, uterus, perineum

III. PHYSICAL EXAMINATION

GENERAL APPROACH

- If possible, dress the patient with a front opening shirt.
- Measure the patient's height, weight and blood pressure.
- Ensure that the patient's bladder is empty.

- If the patient is in the first trimester of pregnancy, make sure that you examine in accordance with gynecological examination check-list.
- If the patient is in the 2nd or 3rd trimester of pregnancy, proceed your examination as outlined below.
- Lay the patient down keeping her back at 45 degree angle and bring her knees to flexion
- See if there is chloasma on the face.
- Note the hair dryness, oiliness, hair loss.
- Check if the conjunctivas of the eyes are pale.
- Check if there is congestion in mucous membranes and septums of the nose.
- Check the gums and teeth in the mouth.
- Inspect and palpate thyroid gland. There may exist symmetrical enlargement.
- Palpate apical pulse, it may be slightly higher than normal. Perform auscultation, soft systolic murmur can be heard.
- Check if there are nipples, and check for their symmetry and colors. Montgomery glands may be swollen and areola becomes darker. Palpate if there is a mass; it is expected to be tender and nodular. Pinch the nipples and see if colostrum is coming out.
- Inspect abdominal stria, linea nigra, scars and contours.
- See if there is peripheral edema.

ABDOMINAL EXAMINATION

- Identify the height of the fundus. To do this: After 20-24 weeks gestational age, the distance between umbilicus and fundus is measured in centimeters and every centimeter is counted as 1 week.
- Palpate if there are fetal movements and uterine contractions.
- The physician faces the patient, palpates the abdomen with the palms to feel the fundus height. The physician tries to determine fetal part in fundus. (head, breech.) (LEOPOLD MANEUVER I)
- Then, fetal parts at the right side of the abdomen are palpated with the left hand while the right hand remains steady on the left side of the abdomen. (Vertebral column, legs, arms, etc.). Then the same process is repeated at the left side of the patient using right hand while the left hand remains steady on the right side of the abdomen. (Leopold II) (Situs and position of the fetus are determined by Leopold I and II maneuvers.) 117
- Then the examiner grasps the abdomen just above pubic symphysis with the right hand in order to recognize presenting part while pushing fundus with the thumb and index finger of the left hand. (LEOPOLD III)
- The physician faces the feet of the patient and presses on pubic symphysis with the index, middle and ring fingers of both hands to understand if the presenting part is passed through pelvic inlet. (LEOPOLD IV)
- Fetoscope is placed one third upper part of the abdomen between umbilicus and crista iliaca superior. After an adaptation period, fetal pulse rate is counted. If fetal pulse cannot be obtained at this point, other quadrant is explored in the same way. Meanwhile, radial pulse of the mother is checked simultaneously. This is applied after 18 weeks of gestation.
- The patient is assisted while getting up and she is asked to get dressed.

PREGNANCY EXAMINATION SKILL

NO	STEPS
1	Get acquainted with the patient and give her information about the procedures to be carried out (*)
2	Stand at one side of the woman while facing her
3	For the <u>first Leopold maneuver</u> ; palpate the fundus deeply using ulnar sides of your both hands. Touch the fundus arc with the palms of your fingers.
4	While the fingertips of both hands are touching each other, gather information about the fetal parts in fundus and in upper parts of the fundus
5	For the <u>second Leopold maneuver</u> ; palpate right and left sides of the abdomen with the palms of both hands. Immobilize uterus with one hand while palpating with the other hand. Press deeply with the palms and fingers of the examining hand and try to determine the fetal parts palpated.
6	Repeat the same maneuver with the other hand and try to determine the location of the fetal back and its small parts. (The fetal back feels will feel smooth and flat).
7	For the <u>third Leopold maneuver</u> ; grasp the presenting part just above the pubis. Move left and right.
8	If it is round, firm and moves independently, consider cephalic presentation. If it is wider and softer, consider breech presentation.
9	For the <u>fourth Leopold maneuver</u> ; face the feet of the examined patient. While both hands are open, palpate lower right and left sides of the abdomen the fingers pointing each other and the pelvis.
10	Make sure that ulnar sides of the hands are parallel to inguinal folds.
11	Without forcing with fingers, apply light pressure to the deep on pelvic inlet (muscle contraction is prevented) When the fingers of both hands feel the presenting part, determine if it is fixed and how much of it enters pelvis.
12	Fetoscope is placed one third upper part of the abdomen between umbilicus and crista iliaca superior.
13	Wait until you adapt.
14	Auscultate the fetal heart sounds for one minute.
15	If fetal pulse cannot be obtained at this point, try other quadrants in a same manner.
16	Meanwhile, check the radial pulse of the mother simultaneously.
17	Assist the patient to get her up and tell her to get dressed.

(*) These steps are skipped if the examination is performed on a dummy.

CERVICAL EFFACEMENT AND THINNING PHYSICAL EXAMINATION GUIDE

NO	STEPS
1.	Introducing oneself and giving information about the examination. (*)
2.	Laying the patient down in lithotomy position and covering with a sheet.(*)
3.	Wearing sterile gloves on the examining hand.
4.	Wiping external genital organs with a cotton swap or gauze strip soaked into antiseptic solutions.
5.	Gently pushing index and middle fingers (2nd and 3rd fingers) into the vagina and reaching collum.
6.	Checking the consistency and position of the collum (facing forward, backward and disappearance).
7.	The fingers are pushed into the opening in the centre of collum to determine effacement in centimeters.
8.	Determining effacement and thinning of collum using 2nd and 3rd fingers.
9.	Advancing the fingers carefully through collum opening and determining the presenting part and if the membranes exist.
10.	After the examination is completed, giving information to the examined patient and assisting to get her up.

(*) These steps are skipped if the examination is performed on a dummy.

PSYCHIATRIC ANAMNESIS AND EXAMINATION GUIDE IN ADULTS

Some general terms must be well-understood in order to perform complete assessment of a psychiatric patient and to establish a diagnosis.

Disease: A set of associated signs and symptoms with an identifiable etiology. For example, Diabetes, coronary artery disease, etc.

Syndrome: A general term used for disorders the etiology of which is not fully elucidated. Most pathological conditions described in psychiatry suit the definition syndrome.

Mental disorder: Syndromes constituting a significant clinical problem, affecting many patients and being affected by common etiological source and common treatment methods.

Psychosis: Is a term used for conditions characterized by impaired ability to assess reality, delusions or hallucinations, exhibiting disorganized and bizarre behavior. Insight is often missing. For example, schizophrenia, schizoaffective disorder.

TAKING ANAMNESIS:

In order to perform a proper assessment while taking the history for the symptoms of a mental disorder, starting from when and how the presenting symptoms occurred provides better assessment. Triggering factors, challenging life events are investigated. The course and severity of symptoms and the functionality of the person are sought. After obtaining the current history, it is investigated when and how the symptoms occurred at the first time. In chronic cases, history can be given in a chronological order starting from the beginning. Are the symptoms continuous or intermittent? Is there any complete recovery periods and is there any specific factor triggering each period? How does he explains the symptoms he/she has experienced? The patient connects these events with which causes?

While taking history, the patient is expected to tell about his/her problems by asking open-ended questions. During interview, supportive questions can be asked to promote the patient telling his/her story such as "What have you done at those times" or "how did you feel about it". If deemed necessary, the patient can be screened for common mental disorders such as depression and psychotic disorders by asking closed-ended questions.

After taking the history and performing mental examination, past history, personality and social development, family and work life, and marriage history can be examined in another interview.

MENTAL EXAMINATION

After obtaining detailed history, past history and family history of the patient, assessment is proceeded with mental examination. In the examination of mental status, physician evaluates the signs and symptoms listed below that he noticed in his/her patient.

General Appearance:

External appearance of the patient, self-care, if the clothing is appropriate to his/her socioeconomic level and if the patient has an appearance appropriate to his/her age are evaluated in this part. A patient with a diminished self-care should suggest psychosis or depression. It is highly possible that a patient with excessive make-up and exaggerated clothing not appropriate to his/her age might be in manic attack. Prominent features in external appearance are noted, if any.

Attitude towards the interview and the interviewer:

Patient's general attitude that he predominantly exhibited during the interview is indicated (for example, nervous, prone to tell about his/her problems himself, sufficiently giving attention to the interviewer, unwilling, etc.). The patient can be extremely attentive, careless, flattering, defensive and mistrustful to the interviewer.

COGNITIVE AND SENSORY AREA

Consciousness:

It is the patient's ability to sustain attention and maintain the interview with his/her general alertness. Disturbances in cognition is recorded as foggy conscious, stupor, precoma and coma.

Foggy consciousness: Defines a specific condition characterized by drowsiness and poor response to stimuli.

Stupor: Defines the conditions where the patient is inactive and does not talk and giving inadequate response to stimuli.

Precoma: Is the previous stage preceding coma; the patient responds to painful stimuli.

Coma: The most severe form of altered state of consciousness. The patients do not give observable response in terms of mental and motor activity except respiration. Coma is graded according to EEG findings and reflexes that remained intact.

Orientation:

Ability to evaluate temporal and spatial relationship between the person and the environment and his relationship with the social environment. Orientation to place, time and person should be assessed. Orientation to time is assessed by asking the patient days, months and years. Orientation to place is examined by asking the patient about the location, province, town, vicinity, building, etc. where the patient lives. Orientation to person is assessed by asking the patient his name or the names of the other people living around.

Memory:

It defines the ability to record, store and recall the past experiences. Immediate memory is related to close events, very short-term memory is related to events happened 5-15 minutes ago, short-term memory is related with the last 48 hours and long-term memory is related with the past events.

In memory examination, the patient is asked the names of three unrelated objects. The patient is asked to repeat them and it shows the immediate memory. The patient is asked to keep these in his/her mind. 5-10 after talking about other issues, the patient asked for the names of the same objects; this shows very short-term memory. To assess short-term memory, the patient is asked to remember the events in the past few days. What she ate at breakfast, titles of the important events in the newspaper and significant daily events can be asked. To assess long-term memory, the patient can be asked about his past important event such as where he was born, how many brothers he has, in which year the patient served in the army or his marriage date.

Retrograde amnesia: Is the loss of previous memories. In other words, the patient cannot recall the events happened prior to a certain event. For example, retrograde amnesia occurs after acute head trauma involving the event preceding the trauma (generally first few minutes).

Anterograde amnesia: Lasting memories cannot be established prospectively. The patient cannot record new 21 information obtained after a particular event.

Confabulation: The patient tells about the events not actually happened to fill the memory gap. It is observed in common organic disorders.

Déjà vu: The patient feels an event that he did not experienced as if he experienced before.

Jamais vu: The patient feels an event that he experienced as if he did not experience before.

Temporary darkening of consciousness (black out): It is a temporary memory disorder caused by heavy alcohol intake

Attention and concentration:

Attention defines the ability of a person to selectively focus on stimuli from inside or the surrounding. Concentration is the ability to sustain this focus. To examine attention and concentration, the patient is asked to count from 10 back by 3 or to spell back the letters of simple words such as "book, earth". To assess spontaneous attention, at any part of the interview the patient can be asked to close the eyes and to tell the objects in the room. In voluntary attention, the patient is asked to look at the objects on the table for 30 seconds and then tell these objects by closing his eyes. Spontaneous and voluntary attention may have increased in mania and paranoid disorders.

Distractibility: Distractibility of the attention by external stimuli. Is common in mania.

Intelligence and general information level:

Intelligence is evaluated roughly. General information level is assessed by asking the names of the largest five cities, names of the presidents or prime ministers, the country's approximate population, name of the city's mayor, important events of the country.

Calculation:

It is assessed by asking to count back from 100 by 3 or by asking similar questions. "How many breads can be bought with 2 TL, how much is the change?" Such questions also assess calculation.

Judgment:

Judgment is normal if one can judge his condition correctly and take correct decisions. "What would you do if a smoke appears while sitting in a cinema?" Such questions can be asked that correct answer is known.

Reality Testing:

The ability of a person to distinguish the events in outside world from those happening in his mind.

Abstract thinking:

This ability is assessed by asking the patient to explain the meaning of aphorism or by asking the similarities/differences between certain words-objects.

Insight:

Insight of disease; for a patient being aware of his illness. In full insight, the patient is aware that current signs and symptoms are caused by the disease. In partial insight, the patient is aware of the disease but relates to several outer factors. Insight is absent in psychotic disorders in which reality testing has been compromised.

PERCEPTION

Perception disorder related with five common senses (hearing, vision, taste, touch and smell) are recorded. Nature of the perception disorders and in which conditions they occur should be indicated. Drugs, sleep deprivation, lack of stimulus can increase perception disorder. Perception disorders include:

Illusion: Faulty interpretation of an existent outer stimuli according to his own inner world. For example, resembling a towel hang on the door to a dead body covered with shroud.

Hallucinations: Can be defined as perception or belief of perception of an outer stimulus that do not actually exist. For example, hearing sounds in an environment that nobody exists. Hallucinations can be in the form of auditory, visual, smell, taste and tactile hallucinations. The most common in schizophrenia is auditory hallucinations. Visual hallucinations are more common in organic mental disorders such as delirium but tactile hallucinations can also occur. Hallucinations of taste and smell should suggest epilepsy (temporal lobe).

Hypnagogic hallucinations: Occurs while falling asleep.

Hypnopompic hallucinations: Occurs while awaking from sleep.

Depersonalization: Alienation from a part or all of one's body, perceiving as if it is not his own. The patient can feel like as if he is watching himself from a distance. The patient can feel as if his face on the mirror is not his own. Can also be seen in normal people during fatigue.

Derealization: The objects in the outer world are perceived as if they are not real or has been changed. In other words, the person feels himself alienated in depersonalization where as the person feels the outer objects alienated in derealization.

THOUGHT

Thought process:

The primary thought process: It is unreasoning, derealistic, concrete mode of thought that no a cause and effect relationship cannot be established between the notions. Such way of thinking is seen at early stages of the childhood, in dreams and psychosis.

Secondary thought process: Formal way of thinking seen in normal people.

Dereism: Notion that is not logical or suits experiences and unrelated to reality.

Magical thinking: A power is attributed to a thought; it is believed that absolute thoughts cause or prevent some events. It is the way of thinking at early childhood.

Autistic thinking: Being occupied with and intrinsic, idiosyncratic world; to a certain extent it is used equivalent to dereism.

Structure of thought:

Disintegration of connotations: Flow of ideas unrelated with each other. There is uncertainty in the flow of ideas, inability to focus a particular topic, purposelessness, unreasoning, complexity and strangeness. If the situation is serious, speech can become coherent.

Flight of ideas: In this case, thoughts are moving quickly, the thought does not have a general direction, connections between the thoughts are incidental and the thoughts are generally understandable. With this feature, it is distinguished from disintegration of connotations. It mostly seen in mania.

Incoherence: Garbled, incomprehensibly corrupted speech due to lack of logical and grammar connection. Is an important sign of schizophrenia.

Perseveration: To continue responding to a former stimulus despite encountering a new stimulus. The patient cannot pass a new topic and continue mentioning same things.

Word salad (Logore): Consistent and sensible speech in an increased amount. It is mostly seen in manic patients.

Circumstantiality: Details are full of explanations, but the person eventually getting back to the point, indirect way of speaking.

Tangentiality: Associations cannot be created for a purpose, a pattern of speech never reaching the intended point.

Echolalia: Repeating the words said by another person.

Neologism: New words are created by the patient (for example, "Mapril").

Clang associations: Association to words based on the similarity of their sounds when no logical association between the words exists.

Pressured speech: Unusual increase in the rate or speed of conversation, speech pattern difficult to cut. Often seen in mania.

Block: Sudden pause in the flow of thought. The patient may suddenly stop the conversation. If he is asked about it later, he might say that his "brain is drained". If starts speaking again, talks about another topic. A finding that is quite typical for schizophrenia.

Thought content:

Delusions: Firm wrong beliefs that do not fit cultural, social status and education of the patient; appears without outer stimulus and does not fit to the known reality. An important feature is that it develops in an unrealistic manner and such conclusion cannot be reached with a normal thought process.

Bizarre delusions: Delusions that are not likely to come true. For example, "The Martians are following me," this is ¹²³ a bizarre delusion.

Non-bizarre delusions: Delusions that are likely to come true. For example, "MIT is following me," this is a non-bizarre delusion.

Delusions complying with the mood: Delusions that comply with the mood (for example; a depressed patient may see himself guilty for economic deterioration in the country).

Delusions not complying with the mood: Delusions the content of which do not comply with the patient's mood (for example; a depressed patient may think that his thoughts are being controlled or spread).

Systematic delusion: Complex delusional system formed by the combination of delusions developed in connection with the previous delusion. Delusions in schizophrenia are less systematic, whereas delusions in delusional disorder are more systematic.

Obsession: Intrusive thoughts that a person cannot avoid even if he knows they are absurd.

Excessively loaded thought: Unreasonable and erroneous thoughts occupying the person's mind that do not have delusional or obsessional character however significantly influencing the patient's life and realized if the patient's history is known. Patient is occupied with a less strong belief compared to delusions; however, unlike obsession, the patient is not aware that this thought is of no sense.

Persecutory delusions: A general term used for delusional condition in which the person thinks that someone would hurt, cheat him or harm; these delusions generally have a suspicion content.

Reference (inclusion) delusions: Belief that surrounding events, objects and people have a particular significance to oneself (for example; belief that he is being mentioned in the news on television).

Passivity (being controlled) delusions: The person believes that his wishes, feelings, thoughts and behaviors are controlled by some external forces (for example; thought insertion, thought theft or spread). Also known as Schneiderian delusions in schizophrenia.

Grandiose delusions: Thought of inflated power and importance (for example; a manic patient may see himself as a prophet to the world to spread a new religion).

Delusion of jealousy (infidelity): Believing that her husband or partner is cheating her.

Erotomania: Belief that a famous or important person is in love with him.

Nihilistic delusions: Believing that himself, others and the world do not exist and passed away.

Physical (somatic) delusions: Delusions about bodily functions (for example; his brain has decayed, bile is emptying into the lungs, blood stays still in the vessels and does not flow).

SPEECH

Here, the patient's speech rate, tone of voice and whether or not he gives sufficient answers to the questions are recorded.

EMOTIONAL AREA

Affection:

Expression of the emotions that are reflected to the patient's facial expression and behaviors. It refers to a short-term emotional state.

Appropriate affection: Affection appropriate to the emotions that are described by the patient (for example; afflicted affection of a depressed patient).

Inappropriate affection: Described emotion does not match with the expressed affection (for example; the patient is expressing that she is very happy while crying at the same time)

Blunt affection: Significantly diminished expression of the intense emotions.

Restricted affection: Significantly diminished expression of the emotions although not in an extent in blunt affection.

Labile affection: Independent from external stimulus, there is sudden and rapid change in the expression of the emotions (for example; a patient laughing like a clown suddenly starts crying).

Mood:

It tells how the patient feels him/herself. It is a long-term emotional situation. Some of them are anxious, ^{1,24} euphoric, nervous, irritable, angry, calm.

Dysphoric mood: Unpleasant, distressing state of a mood.

Depressive mood: Intense sadness, depressed mood accompanied by feelings of unhappiness.

Euthymic mood: Stating that the mood is not depressed or elevated, normal range of mood.

Irritable mood: Easily, "shining", storming mood.

Euphoric mood: Feeling oneself very powerful, energetic and in a very good state.

Elevated mood: Increased joy and self-confidence, unusual state of joy.

Ecstasy: An intense state of rapture.

BEHAVIORS:

In this section, expressed behavior patterns are recorded both quantitatively and qualitatively.

Aggression: Anger with the purpose of verbal or physical target, violence, hostility containing acts.

Agitation: Picture of heavy anxiety with behavioral unrest. The patient's behavior is not purposeful. Includes behaviors such as navigating restlessly, shaking his foot, rubbing the hands. This picture may be associated with confusion in delirium and dementia. It can be seen in a picture of heavy anxiety.

Excitation (Flaring): Expression of anger not planned intentionally, behaviors containing aggression and violence that are observed in patients with schizophrenia and mania spontaneously or triggered by unimportant events.

Self-mutilation: Self-injurious behavior (for example; opening body sores with a cutter, burning himself with a lighted cigarette).

Self-slaughter: The person attempts to kill himself.

Parasuicide: Taking a toxic substance or injuring himself consciously as not to kill himself.

Tic: Sudden, spasmodic, involuntary muscle movements occurring in a small muscle group.

Stereotype: Repetitive, non-purposeful and uniform movements.

Mannerism: Purposeful, repetitive, non-sense behaviors.

Psychomotor retardation: A slowdown in the overall behavior.

Catatonia: It defines extreme slowdown and complete cessation in psychomotor area. It can be seen in schizophrenia.

Wax flexibility (catalepsy): It describes the keeping the given posture for a long time. It is seen in catatonic schizophrenia.

Cataplexy: Sudden, bilateral loss of muscle tone in the lower extremities. It is seen in narcolepsy.

Echopraxia: The patient reproduces the movements he has seen even if he is not asked to do so.

Compulsions: It is the state of acting according to impulses and restriction causes anxiety. Behaviors that develop in response to obsessions and performed by following certain rules in which the patient hopes that it will prevent bad thing to happen in the future.

CHILD AND ADOLESCENT MENTAL HEALTH ASSESSMENT GUIDE

The department of child and adolescent mental health and diseases deals with investigating, describing, classifying, treating and preventing the disorders in mental and emotional abilities, behaviors, environmental adaptation of the children and adolescents.

The physician must be clear about the following questions relevant to application:

- What is the reason the application is made?
- Who has the problem? (Child, adolescent, family, school, teacher, social environment, etc.)
- What is the nature of the assistance that the family is looking for? (The treatment of child's disease, correcting associated problems, child protection, arrangement for the unity of the family, such as rehabilitation)

TAKING ANAMNESIS:

In the field of child and adolescent mental health, the history is taken from the parents, other care givers, teachers and from the child him/herself according to his/her development level.

- **The child's identity information (name and surname, age, sex, place of birth, place of residence)**
- **The problem that the parents are complaining from, duration, the reasons from their view, age at onset of the symptoms and course, determining the factors that alleviate or relieve the problems.**
- **Detailed developmental history of the child**

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Characteristics of the pregnancy period

Birth history

Motor development (lifting his head, supported and unsupported sitting, crawling, walking, gross and fine motor development)

Speech and language development (spelling, vocabulary, sentence building)

Toilet training

Feeding process and transitions (getting breast milk, switching to additional food, feeding behavior)

Sleep (day and night sleep, sleep times and duration, falling asleep habits)

Circumcision, illness, trauma, history of a surgery

Information about the family (family structure and layout, the attitudes of parents, marriage history, siblings, physical and mental illnesses of nuclear family and extended family)

Obtaining information about caregivers

School history and Social history (age at starting the school, age at learning to read and write, school performance, relationships with teachers and friends)

Sexual development (secondary sex characteristics, age at puberty, relationship with the opposite sex, sexual attitudes and behaviors)

MENTAL EXAMINATION

- **Physical appearance** (whether or not physical appearance is appropriate to age and socioeconomic level, dysmorphic features, tics, stereotypes, gait and posture disturbances, signs of physical trauma, facial expression)
- **Parent-child communication**
- **Orientation (time, person, place)**
- **Motor behavior and activity level**
- **Thought and perception**
- **Speech and language**
- **Cognitive development and intelligence**
- **Attention**
- **Memory**
- **Mood and temperament**