

QUICK GUIDE IN HISTORY TAKING AND PHYSICAL EXAMINATION



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Quick Guide in History Taking and Physical Examination

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PREFACE

i

Accurate history taking is the most difficult and the most important part of a consultation in the majority of medical diseases. It becomes progressively simpler as the clinician's knowledge of the disease and experience increases.

An interpretation of the symptoms and signs leads to the identification of a disease. While the complete description involves the knowledge of the causation (etiology), and anatomical and functional changes that are present. The past and present history of the illness is also highly important together with the condition of the patient, as shown by a full clinical examination.

This book is written in a simple way to assist medical students and clinicians in developing consultation skills required to elicit a clear history, and the practical skills needed to detect clinical signs of a disease. Where possible, the physical basis of clinical signs is explained to have a better understanding.

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CHAPTER 1

History Taking

Abstract: The present chapter is mainly focused on teaching medical students and junior doctors how to take a history of patients. After taking the history, it's useful to give the patient a run-down of what they've told you as you understand it. For example: 'Mohammed, from what I understand you've been losing weight, feeling sick, had trouble swallowing - particularly meat - and the whole thing's been getting you down. Is that right?' If there is a nod of approval or expressed agreement with the story then it's fairly certain you're getting what the patient wanted to tell you. If not, then you may need to try another approach. This technique can avoid incorrect assumptions by the doctor.

Keywords: Chief complaint, Family history, History of present illness, Past medical and surgical history, Social history.

INTRODUCTION

It is widely taught that diagnosis is revealed in the patient's history. 'Listen to your patient; they are telling you the diagnosis' is a much-quoted aphorism [1].

The basis of a true history is good communication between doctor and patient. The patient may not be looking for a diagnosis when giving their history and the doctor's search for one under such circumstances is likely to be fruitless. The patient's problem, whether it has a medical diagnosis attached or not, needs to be identified [2].

It is important for doctors to acquire good consultation skills that go beyond prescriptive history-taking learned as part of the comprehensive and systematic clerking process outlined in textbooks. A good history is one that reveals the patient's ideas, concerns, and expectations as well as any accompanying diagnosis. The doctor's agenda, incorporating lists of detailed questions, should not dominate the history taking. Listening is at the heart of good history-taking. Without the patient's perspective, the history is likely to be much less revealing and less useful to the doctor who is attempting to help the patient [3].

Often the history alone does reveal a diagnosis. Sometimes it is all that is required to make the diagnosis. A good example is with the complaint of headache where the diagnosis can be made from the description of the headache and perhaps some further questions. For example, in cluster headaches, the history is very characteristic and reveals the diagnosis without the need for examination or investigations [4].

STEP 1 (FIG. 1-2)

Introduction (WIES)

- ☞ Wash your hands before and after the interview.
- ☞ Introduce yourself and your job (that you are a medical student).
- ☞ *For example*, my name is Nasser, a fourth-year medical class student.
- ☞ Explain the purpose of the interview.
- ☞ *For example*, I'm going to ask you some questions about your loin pain.
- ☞ Sit down in a chair if feasible approximately a meter away from the patient. Ensure you are sitting at the same level as them and ideally not behind a desk.

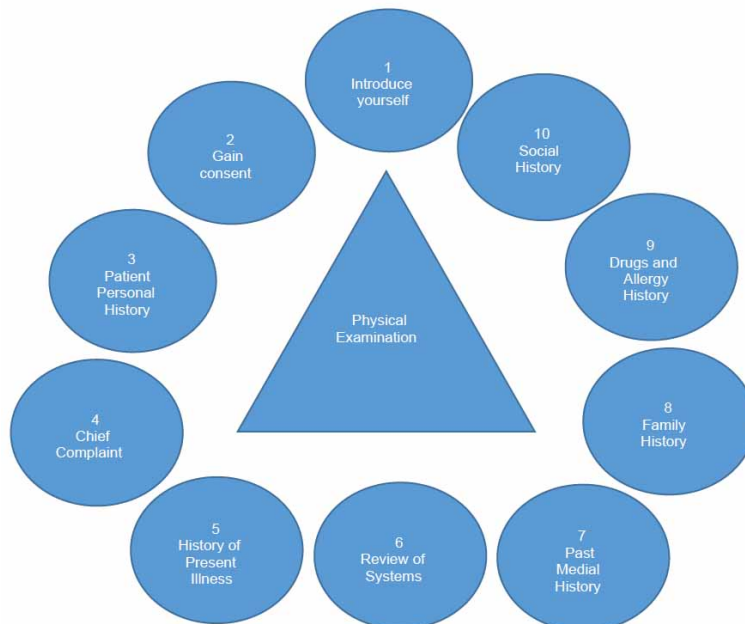


Fig. (1). History taking procedure steps.



Fig. (2). History taking procedure steps.

STEP 2

Gain Consent

Gain consent (means a patient must give permission before they receive any type of treatment or examination). For example: "I'm going to ask you some questions about your chest pain, is that OK or is that FINE?"

Provide specific next steps

STEP 3

Patient Personal History

☞ Patient Name & Age.

▪ **For example:** Can you please tell me your full name and age?

☞ Occupation enquires about the patient's present occupation. If the patient retired must be asked about his/her previous job.

☞ Marital status

☞ Address

CHAPTER 2

General Physical Examination

Abstract: Physical examination is a fundamental aspect of medical practice that involves a systematic evaluation of a patient's body to assess their overall health status and identify any signs of illness or abnormalities. It is typically performed by healthcare professionals, such as physicians, nurses, or other trained medical personnel. The physical examination can provide valuable information that aids in the diagnosis, treatment, and monitoring of various medical conditions. The physical examination, thoughtfully performed, should yield 20% of the data necessary for patient diagnosis and management. The present chapter is mainly focused on how to apply physical general examination

Keywords: Lymph nodes, Eyes, Face, Hand.

INTRODUCTION

Physical examination is the process of evaluating objective anatomic findings through the use of observation, palpation, percussion, and auscultation. The information obtained must be thoughtfully integrated with the patient's history and pathophysiology. Moreover, it is a unique situation in which both patient and physician understand that the interaction is intended to be diagnostic and therapeutic. The physical examination, thoughtfully performed, should yield 20% of the data necessary for patient diagnosis and management [1].

Almost without exception, some medical history about the patient is available at the time of the physical examination. Rarely, there may be no history, or at best brief recordings of acute events. Information pertinent to the physical examination can be learned from observation of speech, gestures, habits, gait, and manipulation of features and extremities. Interactions with relatives and staff are often revealing [1].

Pigmentary changes such as cyanosis, jaundice, and pallor may be noted. Diaphoresis, blanching, and flushing may provide clues about vasomotor tone related to mood or physiologic abnormalities. Aspects of patient habits, interests, and relationships can be ascertained from pictures, books, magazines, and personal objects at the bedside [2].

STEP 1 (FIG. 1)

1. Introduce yourself to the patient and obtain and take permission (informed consent).
2. Wash your hand with water or sterilize it with alcohol.
3. Look at the patient from the end of the bed with an inspection of the patient's general condition and their surroundings like any drains, urine catheter, intravenous (i.v.) fluid, and any medical equipment attached to the patient or in the bed [3].
4. Explain to the patient what you are doing in each step of the examination.
5. Then move to the patient's right side (easy remember just move to your left-hand side).
6. And start to examine your patient.



Fig. (1). First step in the general examination.

STEP 2

Hand Examination [4]

Its first window for the general examination exam looks to:

Dorsum of the Hands (Fig. 2)

- ☞ Assess and compare the temperature (temperature of the patient's hand for assessment of peripheral perfusion),
- ☞ Observe the color of the skin and any scars or swelling.
- ☞ Looking for xanthomata (irregularly shaped, yellowish nodules on the skin) along the extensor tendons indicates cholesterol deposits.

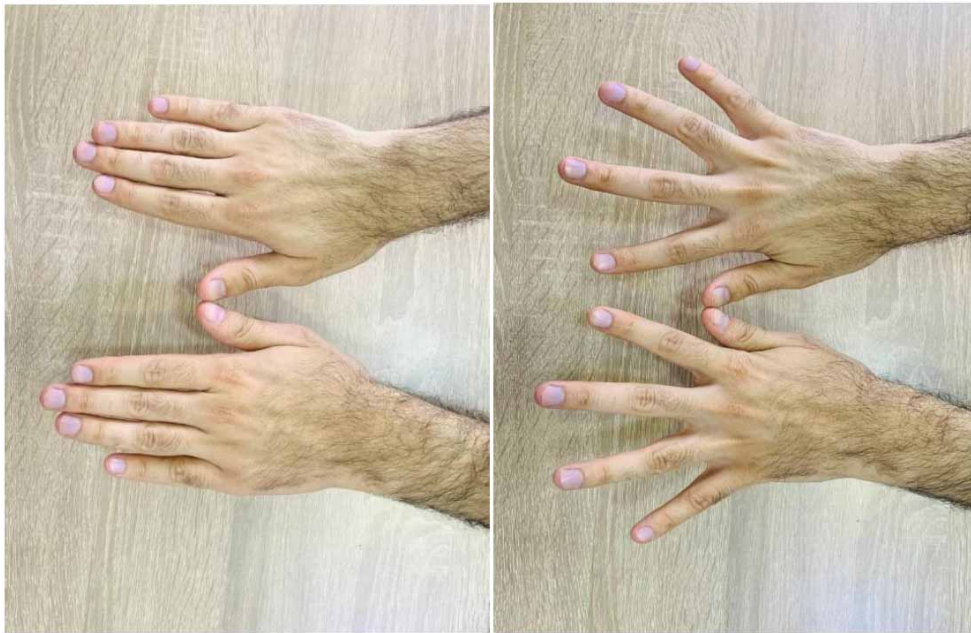


Fig. (2). Dorsum of hand examination.

Palm of Hand (Fig. 3)

- ☞ Palpate the muscle bulk of the thenar and hypothenar eminences if there is any muscle wasting. Wasting of the thenar eminence is suggestive of median nerve damage (*e.g.* carpal tunnel syndrome).
- ☞ Inspect for any evidence of scars.

Exam for Pallor in Palms [5]

- o Palms should not be overstretched, compare the pinkness of the palm with your palm if you are healthy.

Cardiovascular Examination

Abstract: The Cardiovascular examination is typically focused in cardiac and blood vessels. Cardiovascular disease may present with a number of diverse symptoms; non-cardiac causes must also be considered. It allows for an initial assessment of symptoms and is crucial for determining the differential diagnoses and further steps in cardiac diseases. The present chapter gives students details in manual cardiac examination and makes it easy for medical students and junior doctors.

Keywords: Cardiac sound, Heart, Murmur.

INTRODUCTION

Cardiovascular assessment of the patients requires great skill in the techniques of inspection, palpation, and auscultation. A cardiovascular (CVS) examination is essentially an examination of the patient's heart; however, it is a complex examination that also includes an examination of other parts of the body including the hands, face, and neck. The major elements of the CVS examination include observation, palpation, and most importantly auscultation [1].

A thorough history is fundamental; it cannot be replaced by testing. The history must include a thorough systems review because many symptoms apparently occurring in other systems (eg, dyspnea, indigestion) are often caused by cardiac disease [2]. A family history is taken because many cardiac disorders (*e.g.*, coronary artery disease, systemic hypertension, bicuspid aortic valve, hypertrophic cardiomyopathy, mitral valve prolapse) have a heritable basis. Serious cardiac symptoms include chest pain or discomfort, dyspnea, weakness, fatigue, palpitations, light-headedness, a sense of impending fainting, and edema [3].

These symptoms commonly occur in more than one cardiac disorder and in noncardiac disorders.

STEP 1**General Examination***As Mentioned in Chapter Two*

1. Introduce yourself to the patient and obtain and take permission (informed consent).
2. Wash your hand with water or sterilize it with alcohol.
3. Look at the patient from the end of the bed with an inspection of the patient's general condition and their surroundings like any drains, urine catheter, iv fluid, and any medical equipment attached to the patient.
4. Explain to the patient what you are doing.
5. Then move to the patient's right side (easy remember just move to your left-hand side).
6. And start to examine your systematically.

STEP 2**Inspection of Chest (Fig. 1)**

- o Examine for any scars from previous operations or trauma.
- o Examine for any visible cardiac impulses.
- o Examine for any chest deformity (pectus excavatum-funnel chest and pectus carinatum-pigeon chest) since these deformities may displace heart sound during auscultation [4 - 20].



Fig. (1). Chest inspection.

STEP 3**Palpation (Fig. 2)*****Apex Beat*****Position**

Use your hand to palpate the apex beat and localize it with your finger, roll the patient into the left lateral position if necessary. The apex beat should be situated in the fifth intercostal space along the midclavicular line. If it is impalpable here, move inferiorly and laterally (Cardiomegaly). If palpable apex beat on the right side is called dextrocardia, with a prevalence of 1:10,000. Sometimes the apex beat is not palpable. This is usually due to a thick chest wall, emphysema, pericardial infusion, shock, or dextrocardia [21 - 38].

Character

- o **Normal** - apex beat is short and sharp.
- o **Heave** - is a palpable impulse that noticeably lifts the examiner hand, sustained and forceful heave caused by aortic stenosis or systemic hypertension.



Fig. (2). Thrill examination.

Respiratory System Examination

Abstract: The respiratory examination is normally performed according to Osler's classic sequence of inspection, palpation, percussion, and auscultation. All lobes of the lung should be systematically examined. The examiner should be aware of the surface projections of each of the five lobes. The present chapter is mainly focused on how to apply physical examination of the respiratory system

Keywords: Chest, Chest percussion, Lung, Respiratory auscultation.

INTRODUCTION

The lung does not produce a wide variety of symptoms. The cardinal symptoms of respiratory diseases represent the final common pathways of a variety of processes [1, 2]. The constellation of symptoms, their time course, and relative severity, however, remain the physician's first basis for the generation of diagnostic possibilities [3 - 5]. The diagnosis of respiratory diseases and disorders requires the integration of pulmonary history and physical examination data acquired at the bedside with data provided by chest roentgenograms and the pulmonary function and blood gas laboratories. Taken together, these modalities provide a framework for generating and pruning a differential diagnosis and for planning therapy [6].

The physical examination of the lung is referenced to the time frames of inspiration and expiration, just as the cardiac examination is referenced to systole and diastole. In inspiration, the respiratory muscles are doing work, the air is flowing through the airways, and with lung expansion, terminal gas exchanging units are opening. Air flows out through the airways during expiration, but expiration is normally passive, without perceptible muscle activity. Two-thirds of the normal respiratory cycle is spent in inspiration [7].

Anatomy Landmarks of the Respiratory System [8] (Fig. 1)

1. Nipples and sternum

2. Manubriosternal junction (ANGLE OF LOUIS) the point at which the 2^o rib articulates with the sternum
3. Intercostal spaces and RIBS are counted from this reference point
4. Suprasternal notch
5. Vertebra prominence (Spinous process of C7) Diaphragm
6. Clavicle

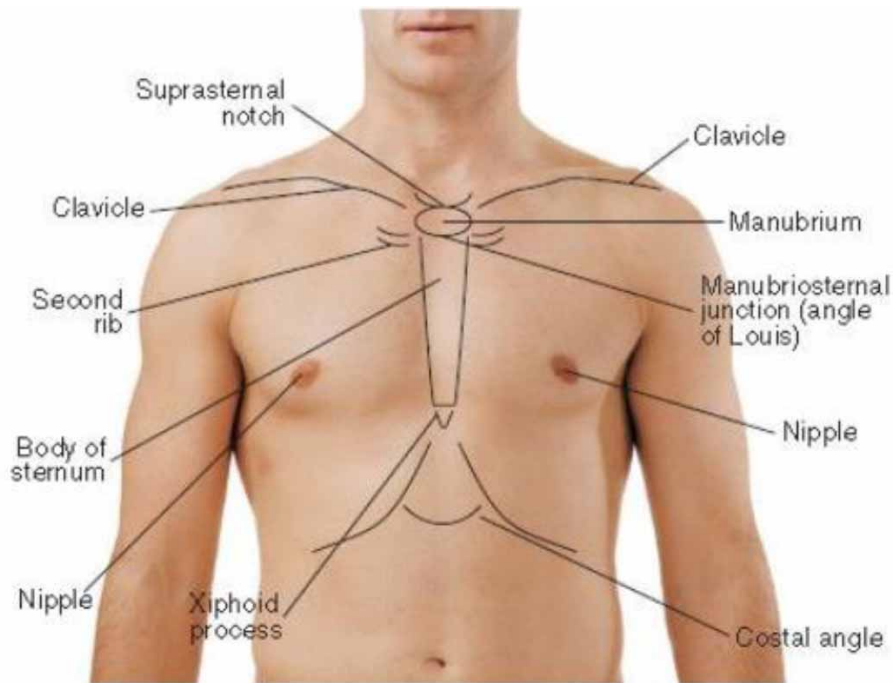


Fig. (1). Anatomic landmarks.

Clinical Examination Landmarks of the Respiratory System [9] (Fig. 2)

⌚ Midsternal Line

A line extending downward from the sterna notch.

⌚ Midclavicular Line

A vertical line parallel to the midsternal line and extending downward from the midpoint of each clavicle.

⌚ Anterior Axillary Line

A line extending downward from the anterior axillary fold.

⌚ Posterior Axillary Line

A line parallel to the anterior axillary line.

⌚ Midaxillary Line

A vertical line starting at a point midway between the anterior and posterior axillary lines.

⌚ Midspinal Line

A vertical line in the center of the back running along the spinal process.

⌚ Midscapular Lines

Vertical lines on the back, parallel to the midspinal line, extending through the apices of the scapulae.

⌚ Infrascapular Area

Area of the posterior thorax lying below the scapulae

⌚ Interscapular Area

Area of the posterior thorax lying between the scapulae.

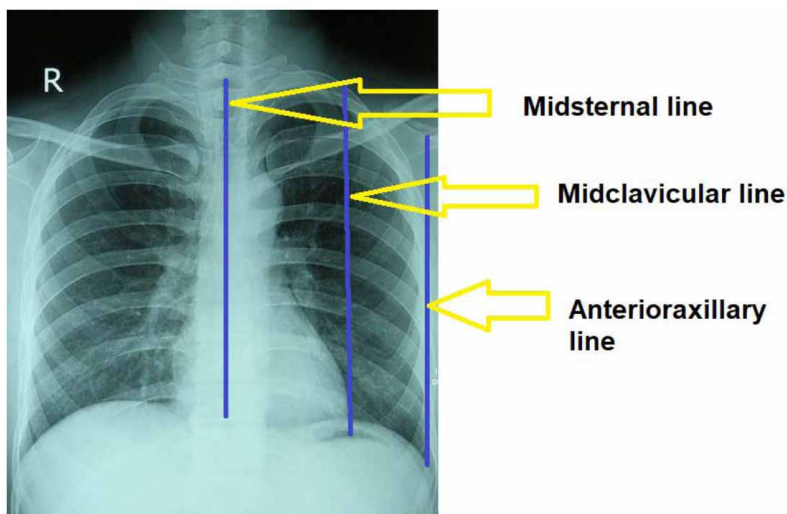


Fig. (2). Clinical landmarks.

Abdominal Examination

Abstract: The abdominal examination consists of four basic components: inspection, palpation, percussion, and auscultation. It is important to begin with the general examination of the abdomen with the patient in a completely supine position. The present chapter is mainly focused on how to examine abdominal systematic.

Keywords: Abdomen, Kidney, Liver, Spleen.

INTRODUCTION

Physical examination plays a key role in patient diagnosis and is an essential part of every clinical encounter of the patient with the physician. An abdominal examination can give diagnostic clues regarding most gastrointestinal and genitourinary pathologies and may also give insight into abnormalities of other organ systems.

A well-performed abdominal examination decreases the need for detailed radiological investigations also plays an important role in patient management.

Performing a detailed abdominal examination should be perfected by all students during medical or nursing school since it is a vital skill for all interprofessional healthcare team members. All healthcare workers should be well aware of the methods to perform an abdominal exam, the significance of any finding that is observed, and be able to correlate the patient's chief complaint, history, general physical appearance, and examination findings of the other systems with the findings observed in the abdominal examination.

The findings observed should be documented and can be used to decide the patient's diagnostic strategy and management plan. The physicians, nurses, and interns dealing directly with the patients should have a strong consensus regarding the patient's condition and effective interprofessional communication with the other sub-specialists dealing with the case. This is necessary to enhance patient-centered care and improve patient outcomes [1].

STEP 1**General Examination***As Mentioned in Chapter Two*

1. Introduce yourself to the patient and obtain and take permission (informed consent).
2. Wash your hand with water or sterilized it with alcohol.
3. Look at the patient from the end of the bed with an inspection of the patient's general condition and their surroundings like any drains, urine catheter, iv fluid, and any medical equipment attached to the patient.
4. Explain to the patient what you are doing.
5. Then move to the patient's right side (easy remember just move to your left-hand side).
6. And start to examine your patient.

STEP 2**Inspection**

- o Patient lying flat on the bed, with their arms by their sides and legs uncrossed (Fig. 1).
- o Expose the abdomen from the xiphisternum to the symphysis pubis, leaving the chest and legs covered [2].

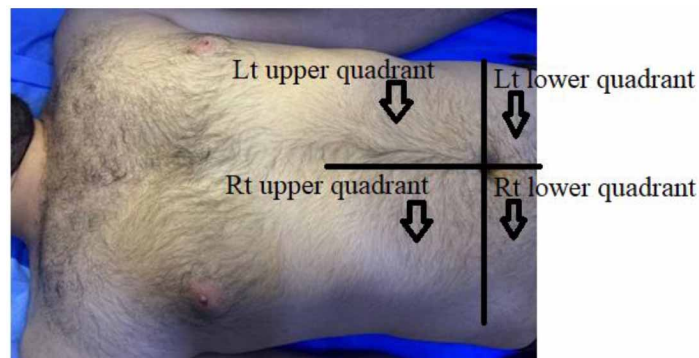


Fig. (1). Abdominal surface anatomy.

LOOK for:

- ⊕ Appearance of the abdomen. Is it flat? If enlarged, does this appear symmetrical/asymmetrical?
- ⊕ Peristaltic bowel movements (bowel obstruction).
- ⊕ Scars of past surgical history.
- ⊕ Abdomen distended? Can be caused by a wide range of pathology including the six f's (fat, fluid, flatus, feces, fetus or fulminant mass).
- ⊕ Caput medusa: engorged paraumbilical veins associated with portal hypertension (*e.g.*, liver cirrhosis).
- ⊕ Striae (stretch marks)? Are irregular areas of skin (bands, stripes or lines) and may be caused by abnormal collagen formation (Cushing's syndrome, Ehlers-Danlos syndrome) or rapid stretching of the skin (pregnancy, obesity).
- ⊕ Hernias, confirm by asking the patient to cough and observe for any protrusions through the abdominal wall (*e.g.*, umbilical hernia, incisional hernia).
- ⊕ Cullen's sign: bruising of the tissue surrounding the umbilicus associated with hemorrhagic pancreatitis (a late sign).
- ⊕ Grey-Turner's sign: bruising in the flanks associated with hemorrhagic pancreatitis (a late sign).

STEP 3**Palpation (Superficial, Deep, Enlarged Organs)**

- o The aim of palpation is to detect tenderness, masses, and organomegaly
- o The patient should already be positioned lying flat on the bed with arms by their sides to help relax the abdominal wall and head resting on a pillow.
- o Ask the patient to show you any pain (if present, examine these areas last).
- o Use your right hand, keeping it flat and in contact with the abdominal wall.
- o Kneel beside the patient to carry out palpation.
- o Observe the patient's face throughout for any sign of discomfort [3].

CHAPTER 6

Neurological Examination

Abstract: A neurological exam, also called a *neuro exam*, is an evaluation of a person's nervous system that can be done in the physicians. It may be done with instruments, such as lights and reflex hammers. It usually does not cause any pain to the patient. The nervous system consists of the brain, the spinal cord, and the nerves from these areas. There are many aspects of this exam, including an assessment of motor and sensory skills, balance and coordination, mental status (the patient's level of awareness and interaction with the environment), reflexes, and functioning of the nerves. The extent of the exam depends on many factors, including the initial problem that the patient is experiencing, the age of the patient, and the condition of the patient.

Keywords: Nervous system, cranial nerve, Reflex.

INTRODUCTION

Neurologic history and physical examination are the most important tools in neurologic diagnosis. Although confirmatory laboratory data, including modern imaging techniques such as CT scanning and magnetic resonance imaging, have provided further accuracy in neurologic diagnosis, the history and physical examination remain the mainstays. Neurologic diagnosis can be divided into two types, anatomic and etiologic: The Anatomic Diagnosis localizes the lesion within a specific area of the neuraxis, *i.e.* cerebral hemispheres, diencephalon, brain stem, spinal cord, or the peripheral nervous system. Findings on neurologic examination are obviously most important in making an anatomic diagnosis. The Etiologic Diagnosis specifies the cause of the lesion and is mainly obtained from information provided by the neurologic history [1].

The time course of the illness often helps define the etiologic agent responsible for causing the anatomic lesion. Several examples follow:

- Lesions of Sudden Onset are typically due to vascular accidents, such as stroke.
- Slowly Progressive Lesions are typically due to expanding mass lesions, such as a tumor or abscess.

- Lesions with Exacerbating and Remitting Courses are frequently due to demyelination, such as can be seen with multiple sclerosis.
- Relentlessly Progressive Lesions Involving Diffuse Areas of the Nervous System are typically due to nutritional deficits or to degenerative disorders of the brain and nervous system

The Neurologic History

The history is often the only way of diagnosing neurologic illnesses that typically have normal or non-focal findings on neurologic examination. These illnesses include many seizure disorders, narcolepsy, migraine and most other headache syndromes, the various causes of dizziness, and most types of dementia. The neurologic history may often provide the first clues that a symptom is psychological in origin.

Points to consider when obtaining a neurologic history:

- ④ Carefully identify the chief complaint or major problem.

Not only is the chief complaint important in providing the first clue to the physician as to the differential diagnosis, but it is also the reason why the patient is seeking medical advice and treatment. If the chief complaint is not properly identified and addressed, the proper diagnosis may be missed and an inappropriate diagnostic work-up may be undertaken. Establishing a diagnosis that does not incorporate the chief complaint frequently focuses attention on a coincidental process irrelevant to the patient's concerns.

- ④ Listen carefully to the patient for as long as is necessary.

A good rule of thumb is to listen initially for at least 5 minutes without interrupting the patient. The patient often volunteers the most important information at the start of the history. During this time, the examiner can also assess mental status including speech, language, fund of knowledge, and affect, and observe the patient for facial asymmetry, abnormalities of ocular movement, a paucity of spontaneous movements as seen with movement disorders.

- ④ Steer the patient away from discussions of previous diagnostic tests and of the opinions of previous caregivers.

Abnormalities on laboratory studies may be incidental to the patient's primary problem or may simply represent a normal variant.

☛ Take a careful medical history, medication history, psychiatric history, family history, and social and occupational history.

Many neurologic illnesses are complications of underlying medical disorders or due to adverse effects of drugs. For example, parkinsonism is a frequent complication of metoclopramide and most neuroleptic agents. A large number of neurologic disorders are hereditary, and a positive family history may establish the diagnosis in many instances. Occupation plays a major role in various neurologic disorders such as carpal tunnel syndrome (computer keyboard operators), and peripheral neuropathy (exposure to lead or other metals) [2].

☛ Interview surrogate historians.

Patients with dementia or altered mental status are usually unable to provide exact details of the history, and a family member may provide key details needed to make an accurate diagnosis. This is especially true for patients with dementia and certain right hemispheric lesions with various agnosias (unawareness of disease) that may interfere with their ability to provide a cogent history. Surrogate historians also provide missing historical details for patients with episodic loss of consciousness, such as syncope, epilepsy, and narcolepsy.

☛ Summarize the history for the patient.

Summarizing the history is an effective way to ensure that all details were covered in sufficient detail to make a tentative diagnosis. Summarizing will also allow the physician to fill in historical gaps that may not have been apparent when the history was initially taken. In addition, the patient or surrogate may correct any historical misinformation at this time.

☛ End by asking the patient what he thinks is wrong with him.

This allows the physician to evaluate the patient's insight into his condition. Some patients have a specific diagnosis in mind that brings them to seek medical attention. Multiple sclerosis, amyotrophic lateral sclerosis, Alzheimer's disease, and brain tumors are diseases that patients often suspect may be the cause of their neurologic symptoms.

General Examination

1. Introduce yourself to the patient and obtain and take permission (informed consent).
2. Wash your hand with water or sterilized with alcohol.

CHAPTER 7

Musculoskeletal System Examination

Abstract: The musculoskeletal system constitutes a demanding part of the physical examination in terms of both knowledge and time. The skillful examiner focuses this critical task through information obtained in a careful history. The examiner should take the opportunity to observe the patient's posture and mobility when he or she first enters the examination room. Musculoskeletal exam nearly exclusively relies on inspection and palpation of the joints and some specialized tests involving those techniques. Rarely do percussion and auscultation play a role in the musculoskeletal exam. The key features to note and record on the examination of the joints are swelling, tenderness, and loss of motion.

Keywords: Bone, Cartilage, Connective tissues, Muscle, Tendons.

INTRODUCTION

Inspection, palpation of the soft tissues surrounding the joint of interest, and evaluation of muscle strength and flexibility should all be part of a comprehensive musculoskeletal examination. In the first place, steps ought to be noticed. There might be an antalgic walk or a sluggish step design due to torment in a particular joint. On the off chance that the patient uses a stick, proper utilization of the stick ought to be surveyed during stride.

Both practical strength and manual muscle testing ought to be performed. Chronic musculoskeletal diseases may have periarticular muscle atrophy and weakness, but functional tests like the sit-to-stand test, which frequently causes pain in knee and hip joints, may be more informative. Soft tissue palpation and dynamic testing can help distinguish musculoskeletal diseases from other diseases. Joint-explicit provocative moves might assist with separating the source in suggestive patients with inadequately restricted torment. A cautious neurologic assessment ought to be performed to ensure that aggravation isn't because of nerve impingement or a neuropathic cycle. Furthermore, the mnemonic for a musculoskeletal examination is TART: **T**, tenderness or sensitivity; **A**, asymmetry (look); **R**, restriction of motion (move); and **T**, tissue texture abnormality (feel).

The diagnosis of somatic dysfunction is based on a palpatory examination assessing TART. Terms to describe the “feel” might be ease and bind or freedom and resistance. Segmental motion can also be tested using pressure applied through the hands, without relying on patient movement for diagnosis.

Anatomy Landmarks of the Musculoskeletal System (Fig. 1)

1. Nipples and sternum
2. Manubriosternal junction (ANGLE OF LOUIS) the point at which the 2^o rib articulates with the sternum
3. Intercostal spaces and RIBS are counted from this reference point
4. Suprasternal notch
5. Vertebra prominence (Spinous process of C7) Diaphragm
6. Clavicle

Clinical Terms in the Musculoskeletal System [1-10]

1. Arthralgia: Pain in the joint.
2. Arthritis: Inflammation of the joint. Implies the presence of warmth, swelling, heat, tenderness, and possibly erythema.
3. Baker's cyst: A synovial cyst found in the popliteal space, which may occasionally rupture into the calf and mimic thrombophlebitis.
4. Bouchard's nodes: Bony enlargement of the proximal interphalangeal joints found in osteoarthritis.
5. Boutonniere deformity: A characteristic deformity found in rheumatoid arthritis, which includes a flexion contracture of the proximal phalangeal, joint associated with hyperextension of the distal interphalangeal joint.
6. Bursitis: Inflammation of a bursa, which is a synovial lined sac, which may or may not be in communication with a joint cavity.
7. Crepitation: A palpable or audible grating or crunching sensation produced by motion of a joint or tendon.
8. Diarthrodial joint: A freely movable joint lined by synovium.

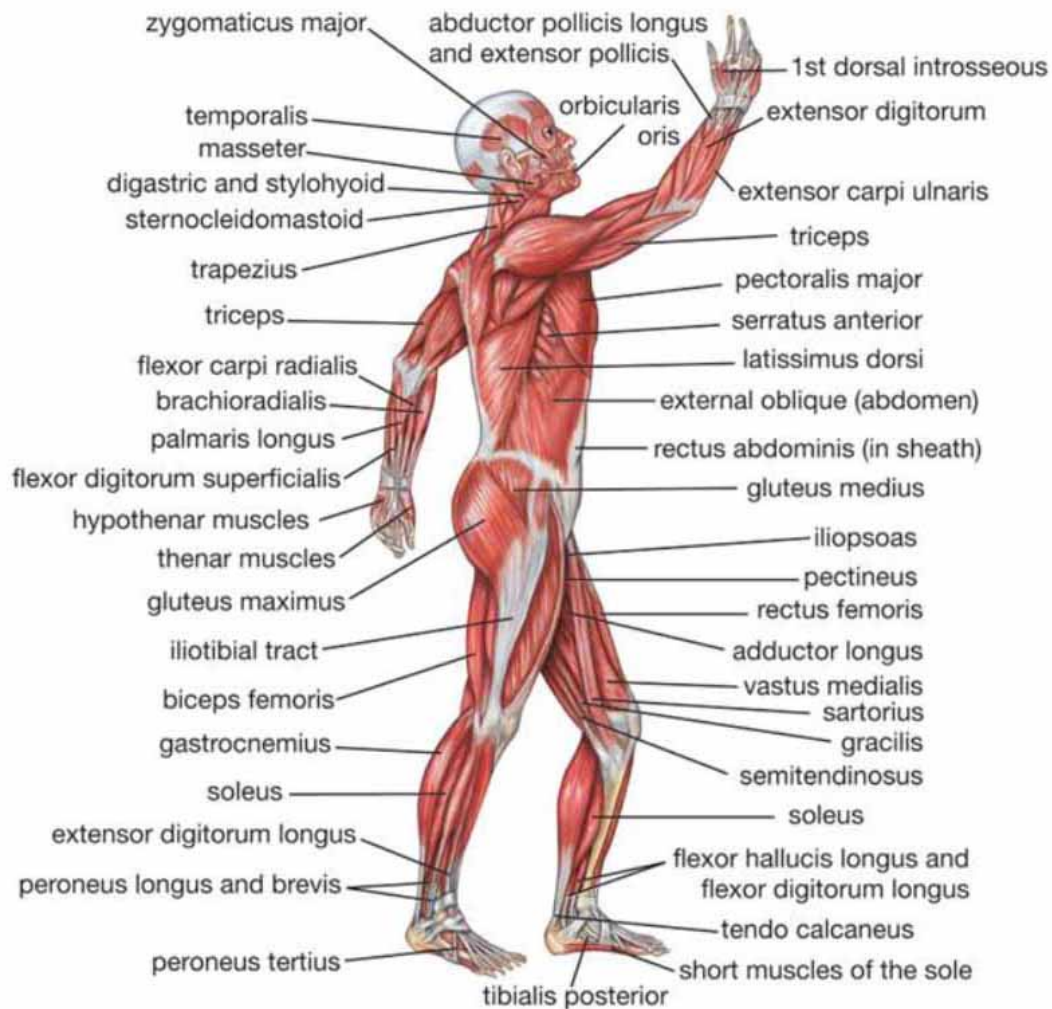


Fig. (1). Anatomic Landmarks (from Encyclopedia Britannica, Inc.).

9. Ganglion: Cystic enlargement arising from joint capsules and tendon sheaths, most common* located on the dorsum of the wrist

10. Hallux vagus: Abnormal abduction of the great toe in relation to the first metatarsal. When the head of the first metatarsal subsequently enlarges on its medial side, a bunion deformity is created. K. Hammer toe: A common toe deformity characterized by hyperextension at the metatarsophalangeal joint, flexion at the proximal interphalangeal joint.

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Nasser Ghaly Yousif

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