

Foundations of Physical Examination and History Taking

CHAPTER 1

Overview of Physical Examination
and History Taking

CHAPTER 2

Interviewing and The Health History

CHAPTER 3

Clinical Reasoning, Assessment, and Plan

Overview of Physical Examination and History Taking

The techniques of physical examination and history taking that you are about to learn embody time-honored skills of healing and patient care. Your ability to gather a sensitive and nuanced history and to perform a thorough and accurate examination deepens your relationships with patients, focuses your assessment, and sets the direction of your clinical thinking. The quality of your history and physical examination governs your next steps with the patient and guides your choices from among the initially bewildering array of secondary testing and technology. Over the course of becoming an accomplished clinician, you will polish these important relational and clinical skills for a lifetime.

As you enter the realm of patient assessment, you begin integrating the essential elements of clinical care: empathic listening; the ability to interview patients of all ages, moods, and backgrounds; the techniques for examining the different body systems; and, finally, the process of clinical reasoning. Your experience with history taking and physical examination will grow and expand, and will trigger the steps of clinical reasoning from the first moments of the patient encounter: identifying problem symptoms and abnormal findings; linking findings to an underlying process of pathophysiology or psychopathology; and establishing and testing a set of explanatory hypotheses. Working through these steps will reveal the multifaceted profile of the patient before you. Paradoxically, the very skills that allow you to assess all patients also shape the image of the unique human being entrusted to your care.

This chapter provides a road map to clinical proficiency in three critical areas: the health history, the physical examination, and the written record, or “write-up.” It describes the components of the health history and how to organize the patient’s story; it gives an approach and overview to the physical examination and suggests a sequence for ensuring patient comfort; and, finally, it provides an example of the written record, showing documentation of findings from a sample patient history and physical examination. By studying the subsequent chapters and perfecting the skills of examination and history taking described, you will cross into the world of patient assessment—gradually at first, but then with growing satisfaction and expertise.

THE HEALTH HISTORY

After you study this chapter and chart the tasks ahead, subsequent chapters will guide your journey to clinical competence.

- *Chapter 2, Interviewing and The Health History*, expands on the techniques and skills of good interviewing.
- *Chapter 3, Clinical Reasoning, Assessment, and Plan*, explores the clinical reasoning process and how to document your evaluation, diagnoses, and plan for patient care.
- *Chapters 4 to 17* detail the anatomy and physiology, health history, guidelines for health promotion and counseling, techniques of examination, and examples of the written record relevant to specific body systems and regions.
- *Chapters 18 to 20* extend and adapt the elements of the adult history and physical examination to special populations: newborns, infants, children, and adolescents; pregnant women; and older adults.

From mastery of these skills and the mutual trust and respect of caring relationships with your patients emerge the timeless rewards of the clinical professions.

THE HEALTH HISTORY

As you read about successful interviewing, you will first learn the elements of the ***Comprehensive Adult Health History***. The comprehensive history includes *Identifying Data and Source of the History, Chief Complaint(s), Present Illness, Past History, Family History, Personal and Social History, and Review of Systems*. As you talk with the patient, you must learn to elicit and organize all these elements of the patient's health. Bear in mind that during the interview this information will not spring forth in this order! However, you will quickly learn to identify where to fit in the different aspects of the patient's story.



STRUCTURE AND PURPOSES

The Comprehensive vs. Focused Health History. As you gain experience assessing patients in different settings, you will find that new patients in the office or in the hospital merit a *comprehensive health history*; however, in many situations, a more flexible *focused*, or *problem-oriented, interview* may be appropriate. Like a tailor fitting a special garment, you will adapt the scope of the health history to several factors: the patient's concerns and problems; your goals for assessment; the clinical setting (inpatient or outpatient; specialty or primary care); and the time available. Knowing the

content and relevance of all components of the comprehensive health history allows you to choose those elements that will be most helpful for addressing patient concerns in different contexts.

These components of the comprehensive adult health history are more fully described in the next few pages. The *comprehensive pediatric health history* appears in Chapter 18. These sample adult and pediatric health histories follow standard formats for written documentation, which you will need to learn. As you review these histories, you will encounter several technical terms for symptoms. Definitions of terms, together with ways to ask about symptoms, can be found in each of the regional examination chapters.

■ Components of the Adult Health History	
Identifying Data	<ul style="list-style-type: none"> ■ <i>Identifying data</i>—such as age, gender, occupation, marital status ■ <i>Source of the history</i>—usually the patient, but can be family member, friend, letter of referral, or the medical record ■ If appropriate, establish <i>source of referral</i> because a written report may be needed.
Reliability	Varies according to the patient’s memory, trust, and mood
Chief Complaint(s)	The one or more symptoms or concerns causing the patient to seek care
Present Illness	<ul style="list-style-type: none"> ■ Amplifies the <i>Chief Complaint</i>; describes how each symptom developed ■ Includes patient’s thoughts and feelings about the illness ■ Pulls in relevant portions of the <i>Review of Systems</i> (see below) ■ May include <i>medications</i>, <i>allergies</i>, habits of <i>smoking</i> and <i>alcohol</i>, which are frequently pertinent to the present illness
Past History	<ul style="list-style-type: none"> ■ Lists childhood illnesses ■ Lists adult illnesses with dates for at least four categories: medical; surgical; obstetric/gynecologic; and psychiatric ■ Includes health maintenance practices such as immunizations, screening tests, lifestyle issues, and home safety
Family History	<ul style="list-style-type: none"> ■ Outlines or diagrams age and health, or age and cause of death, of siblings, parents, and grandparents ■ Documents presence or absence of specific illnesses in family, such as hypertension, coronary artery disease, etc.
Personal and Social History	Describes educational level, family of origin, current household, personal interests, and lifestyle
Review of Systems	Documents presence or absence of common symptoms related to each major body system

The components of the comprehensive health history structure the patient’s story and the format of your written record, but the order shown should not dictate the sequence of the interview. Usually the interview will be more fluid and will follow the patient’s leads and cues, as described in Chapter 2.

Subjective vs. Objective Data. As you acquire the techniques of the history taking and physical examination, remember the important differences between *subjective information* and *objective information*, as summarized

in the accompanying table. Knowing these differences helps you apply clinical reasoning and cluster patient information. These distinctions are equally important for organizing written and oral presentations about the patient.

■ Differences Between Subjective and Objective Data

Subjective Data	Objective Data
What the patient tells you	What you detect during the examination
The history, from Chief Complaint through Review of Systems	All physical examination findings
<i>Example:</i> Mrs. G is a 54-year-old hairdresser who reports pressure over her left chest “like an elephant sitting there,” which goes into her left neck and arm.	<i>Example:</i> Mrs. G is an older, overweight white female, who is pleasant and cooperative. BP 160/80, HR 96 and regular, respiratory rate 24, afebrile.

THE COMPREHENSIVE ADULT HEALTH HISTORY

Initial Information

Date and Time of History. The date is always important. You are strongly advised to routinely document the time you evaluate the patient, especially in urgent, emergent, or hospital settings.

Identifying Data. These include age, gender, marital status, and occupation. The *source of history* or *referral* can be the patient, a family member or friend, an officer, a consultant, or the medical record. Patients requesting evaluations for schools, agencies, or insurance companies may have special priorities compared with patients seeking care on their own initiative. Designating the *source of referral* helps you to assess the type of information provided and any possible biases.

Reliability. This information should be documented if relevant. For example, “The patient is vague when describing symptoms and cannot specify details.” This judgment reflects the quality of the information provided by the patient and is usually made at the end of the interview.

Chief Complaint(s). *Make every attempt to quote the patient’s own words.* For example, “My stomach hurts and I feel awful.” Sometimes patients have no overt complaints, in which case you should report their goals instead. For example, “I have come for my regular check-up”; or “I’ve been admitted for a thorough evaluation of my heart.”

Present Illness. This section of the history is a complete, clear, and chronologic account of the problems prompting the patient to seek care. The narrative should include the onset of the problem, the setting in which it has

developed, its manifestations, and any treatments. The principal symptoms should be well-characterized, with descriptions of (1) location; (2) quality; (3) quantity or severity; (4) timing, including onset, duration, and frequency; (5) the setting in which they occur; (6) factors that have aggravated or relieved the symptoms; and (7) associated manifestations. These *seven attributes* are invaluable for understanding all patient symptoms (see p. XX). It is also important to include “pertinent positives” and “pertinent negatives” from sections of the *Review of Systems* related to the *Chief Complaint(s)*. These designate the presence or absence of symptoms relevant to the *differential diagnosis*, which refers to the most likely diagnoses explaining the patient’s condition. Other information is frequently relevant, such as risk factors for coronary artery disease in patients with chest pain, or current medications in patients with syncope. The *Present Illness* should reveal the patient’s responses to his or her symptoms and what effect the illness has had on the patient’s life. Always remember, *the data flow spontaneously from the patient, but the task of organization is yours.*

Patients often have more than one complaint or concern. Each merits its own paragraph and a full description.

Medications should be noted, including name, dose, route, and frequency of use. Also list home remedies, nonprescription drugs, vitamins, mineral or herbal supplements, oral contraceptives, and medicines borrowed from family members or friends. It is a good idea to ask patients to bring in all of their medications so you can see exactly what they take. **Allergies**, including *specific reactions* to each medication, such as rash or nausea, must be recorded, as well as allergies to foods, insects, or environmental factors. Note **tobacco** use, including the type used. Cigarettes are often reported in pack-years (a person who has smoked 1½ packs a day for 12 years has an 18-pack-year history). If someone has quit, note for how long. **Alcohol and drug use** should always be investigated (see pp. XX–XX for suggested questions). (Note that *tobacco, alcohol, and drugs* may also be included in the *Personal and Social History*; however, many clinicians find these habits pertinent to the *Present Illness*.)

Past History. *Childhood illnesses*, such as measles, rubella, mumps, whooping cough, chickenpox, rheumatic fever, scarlet fever, and polio, are included in the *Past History*. Also included are any chronic childhood illnesses.

You should provide information relative to **Adult Illnesses** in each of four areas:

- **Medical:** Illnesses such as diabetes, hypertension, hepatitis, asthma, and HIV; hospitalizations; number and gender of sexual partners; and risky sexual practices
- **Surgical:** Dates, indications, and types of operations
- **Obstetric/Gynecologic:** Obstetric history, menstrual history, methods of contraception, and sexual function
- **Psychiatric:** Illness and time frame, diagnoses, hospitalizations, and treatments

Also cover selected aspects of *Health Maintenance*, especially immunizations and screening tests. For *immunizations*, find out whether the patient has received vaccines for tetanus, pertussis, diphtheria, polio, measles, rubella, mumps, influenza, varicella, hepatitis B, *Haemophilus influenzae* type B, and pneumococci. For *screening tests*, review tuberculin tests, Pap smears, mammograms, stool tests for occult blood, and cholesterol tests, together with results and when they were last performed. If the patient does not know this information, written permission may be needed to obtain old medical records.

Family History. Under *Family History*, outline or diagram the age and health, or age and cause of death, of each immediate relative, including parents, grandparents, siblings, children, and grandchildren. Review each of the following conditions and record whether they are present or absent in the family: hypertension, coronary artery disease, elevated cholesterol levels, stroke, diabetes, thyroid or renal disease, cancer (specify type), arthritis, tuberculosis, asthma or lung disease, headache, seizure disorder, mental illness, suicide, alcohol or drug addiction, and allergies, as well as symptoms reported by the patient.

Personal and Social History. The *Personal and Social History* captures the patient's personality and interests, sources of support, coping style, strengths, and fears. It should include occupation and the last year of schooling; home situation and significant others; sources of stress, both recent and long-term; important life experiences, such as military service, job history, financial situation, and retirement; leisure activities; religious affiliation and spiritual beliefs; and activities of daily living (ADLs). Baseline level of function is particularly important in older or disabled patients (see p. XX for the ADLs frequently assessed in older patients). The *Personal and Social History* also conveys lifestyle habits that promote health or create risk such as *exercise and diet*, including frequency of exercise; usual daily food intake; dietary supplements or restrictions; use of coffee, tea, and other caffeine-containing beverages; and *safety measures*, including use of seat belts, bicycle helmets, sunblock, smoke detectors, and other devices related to specific hazards. You may want to include any *alternative health care* practices.

You will come to thread personal and social questions throughout the interview to make the patient feel more at ease.

Review of Systems. Understanding and using *Review of Systems* questions is often challenging for beginning students. Think about asking series of questions going from “head to toe.” It is helpful to prepare the patient for the questions to come by saying, “The next part of the history may feel like a million questions, but they are important and I want to be thorough.” Most *Review of Systems* questions pertain to *symptoms*, but on occasion some clinicians also include diseases like pneumonia or tuberculosis.

If the patient remembers important illnesses as you ask questions within the *Review of Systems*, record or present such illnesses as part of the *Present Illness* or *Past History*.

Start with a fairly general question as you address each of the different systems. This focuses the patient's attention and allows you to shift to more specific questions about systems that may be of concern. Examples of starting questions are: "How are your ears and hearing?" "How about your lungs and breathing?" "Any trouble with your heart?" "How is your digestion?" "How about your bowels?" Note that you will vary the need for additional questions depending on the patient's age, complaints, and general state of health and your clinical judgment.

The *Review of Systems* questions may uncover problems that the patient has overlooked, particularly in areas unrelated to the *present illness*. Significant health events, such as a major prior illness or a parent's death, require full exploration. Remember that *major health events should be moved to the Present Illness or Past History in your write-up*. Keep your technique flexible. Interviewing the patient yields a variety of information that you organize into formal written format only after the interview and examination are completed.

Some clinicians do the *Review of Systems* during the physical examination, asking about the ears, for example, as they examine them. If the patient has only a few symptoms, this combination can be efficient. However, if there are multiple symptoms, the flow of both the history and the examination can be disrupted, and necessary note-taking becomes awkward. Listed below is a standard series of review-of-system questions. As you gain experience, the "yes or no" questions, placed at the end of the interview, will take no more than several minutes.

General: Usual weight, recent weight change, any clothes that fit more tightly or loosely than before. Weakness, fatigue, or fever.

Skin: Rashes, lumps, sores, itching, dryness, changes in color; changes in hair or nails; changes in size or color of moles.

Head, Eyes, Ears, Nose, Throat (HEENT): *Head:* Headache, head injury, dizziness, lightheadedness. *Eyes:* Vision, glasses or contact lenses, last examination, pain, redness, excessive tearing, double or blurred vision, spots, specks, flashing lights, glaucoma, cataracts. *Ears:* Hearing, tinnitus, vertigo, earaches, infection, discharge. If hearing is decreased, use or nonuse of hearing aids. *Nose and sinuses:* Frequent colds; nasal stuffiness, discharge, or itching; hay fever; nosebleeds; sinus trouble. *Throat (or mouth and pharynx):* Condition of teeth and gums; bleeding gums; dentures, if any, and how they fit; last dental examination; sore tongue; dry mouth; frequent sore throats; hoarseness.

Neck: "Swollen glands"; goiter; lumps, pain, or stiffness in the neck.

Breasts: Lumps, pain, or discomfort; nipple discharge; self-examination practices.

Respiratory: Cough, sputum (color, quantity), hemoptysis, dyspnea, wheezing, pleurisy, last chest x-ray. You may wish to include asthma, bronchitis, emphysema, pneumonia, and tuberculosis.

Cardiovascular: Heart trouble, high blood pressure, rheumatic fever, heart murmurs; chest pain or discomfort; palpitations, dyspnea, orthopnea, paroxysmal nocturnal dyspnea, edema; results of past electrocardiograms or other cardiovascular tests.

Gastrointestinal: Trouble swallowing, heartburn, appetite, nausea. Bowel movements, stool color and size, change in bowel habits, pain with defecation, rectal bleeding or black or tarry stools, hemorrhoids, constipation, diarrhea. Abdominal pain, food intolerance, excessive belching or passing of gas. Jaundice, liver, or gallbladder trouble; hepatitis.

Urinary: Frequency of urination, polyuria, nocturia, urgency, burning or pain during urination, hematuria, urinary infections, kidney or flank pain, kidney stones, ureteral colic, suprapubic pain, incontinence; in males, reduced caliber or force of the urinary stream, hesitancy, dribbling.

Genital: *Male:* Hernias, discharge from or sores on the penis, testicular pain or masses, scrotal pain or swelling, history of sexually transmitted diseases and their treatments. Sexual habits, interest, function, satisfaction, birth control methods, condom use, and problems. Exposure to HIV infection. *Female:* Age at menarche; regularity, frequency, and duration of periods; amount of bleeding; bleeding between periods or after intercourse; last menstrual period; dysmenorrhea; premenstrual tension. Age at menopause, menopausal symptoms, postmenopausal bleeding. If the patient was born before 1971, exposure to diethylstilbestrol (DES) from maternal use during pregnancy (linked to cervical carcinoma). Vaginal discharge, itching, sores, lumps, sexually transmitted diseases and treatments. Number of pregnancies, number and type of deliveries, number of abortions (spontaneous and induced), complications of pregnancy, birth control methods. Sexual preference, interest, function, satisfaction, any problems, including dyspareunia. Exposure to HIV infection.

Peripheral vascular: Intermittent claudication; leg cramps; varicose veins; past clots in the veins; swelling in calves, legs, or feet; color change in fingertips or toes during cold weather; swelling with redness or tenderness.

Musculoskeletal: Muscle or joint pain, stiffness, arthritis, gout, and backache. If present, describe location of affected joints or muscles, any swelling, redness, pain, tenderness, stiffness, weakness, or limitation of motion or activity; include timing of symptoms (e.g., morning or evening), duration, and any history of trauma. Neck or low back pain. Joint pain with systemic features such as fever, chills, rash, anorexia, weight loss, or weakness.

Psychiatric: Nervousness; tension; mood, including depression, memory change, suicide attempts, if relevant.

Neurologic: Changes in mood, attention, or speech; changes in orientation, memory, insight, or judgment; headache, dizziness, vertigo; fainting, blackouts, seizures, weakness, paralysis, numbness or loss of sensation, tingling or “pins and needles,” tremors or other involuntary movements; seizures.

Hematologic: Anemia, easy bruising or bleeding, past transfusions, transfusion reactions.

Endocrine: Thyroid trouble, heat or cold intolerance, excessive sweating, excessive thirst or hunger, polyuria, change in glove or shoe size.

THE PHYSICAL EXAMINATION

APPROACH AND OVERVIEW

In this section, we outline the *comprehensive physical examination* and provide an *overview* of all its components. You will conduct a comprehensive physical examination on most new patients or patients being admitted to the hospital. For more *problem-oriented*, or *focused, assessments*, the presenting complaints will dictate what segments of the examination you elect to perform. You will find a more extended discussion of the approach to the examination, its scope (comprehensive or focused), and a table summarizing the examination sequence in Chapter 4, Beginning the Physical Examination: General Survey and Vital Signs. Information about anatomy and physiology, interview questions, techniques of examination, and important abnormalities are detailed in Chapters 4 through 17 for each of the segments of the physical examination described below.

For an overview of the physical examination, study the following description of the sequence of examination now. *Note that clinicians vary in where they place different segments of the examination, especially the examinations of the musculoskeletal system and the nervous system.* Some of these options are indicated below.

As you develop your own sequence of examination, *an important goal is to minimize how often you ask the patient to change position* from supine to sitting, or from standing to lying supine. Some suggestions for patient positioning during the different segments of the examination are indicated in the right-hand column in *red*.

THE COMPREHENSIVE ADULT PHYSICAL EXAMINATION

General Survey. Observe the patient’s general state of health, height, build, and sexual development. Obtain the patient’s weight. Note posture,

The survey continues throughout the history and examination.

motor activity, and gait; dress, grooming, and personal hygiene; and any odors of the body or breath. Watch the patient's facial expressions and note manner, affect, and reactions to persons and things in the environment. Listen to the patient's manner of speaking and note the state of awareness or level of consciousness.

Vital Signs. Measure the blood pressure. Count the pulse and respiratory rate. If indicated, measure the body temperature.

Skin. Observe the skin of the face and its characteristics. Identify any lesions, noting their location, distribution, arrangement, type, and color. Inspect and palpate the hair and nails. Study the patient's hands. Continue your assessment of the skin as you examine the other body regions.

Head, Eyes, Ears, Nose, Throat (HEENT). *Head:* Examine the hair, scalp, skull, and face. *Eyes:* Check visual acuity and screen the visual fields. Note the position and alignment of the eyes. Observe the eyelids and inspect the sclera and conjunctiva of each eye. With oblique lighting, inspect each cornea, iris, and lens. Compare the pupils, and test their reactions to light. Assess the extraocular movements. With an ophthalmoscope, inspect the ocular fundi. *Ears:* Inspect the auricles, canals, and drums. Check auditory acuity. If acuity is diminished, check lateralization (Weber test) and compare air and bone conduction (Rinne test). *Nose and sinuses:* Examine the external nose; using a light and a nasal speculum, inspect the nasal mucosa, septum, and turbinates. Palpate for tenderness of the frontal and maxillary sinuses. *Throat (or mouth and pharynx):* Inspect the lips, oral mucosa, gums, teeth, tongue, palate, tonsils, and pharynx. (*You may wish to assess the cranial nerves during this portion of the examination.*)

Neck. Inspect and palpate the cervical lymph nodes. Note any masses or unusual pulsations in the neck. Feel for any deviation of the trachea. Observe sound and effort of the patient's breathing. Inspect and palpate the thyroid gland.

Back. Inspect and palpate the spine and muscles of the back.

Posterior Thorax and Lungs. Inspect and palpate the spine and muscles of the *upper* back. Inspect, palpate, and percuss the chest. Identify the level of diaphragmatic dullness on each side. Listen to the breath sounds; identify any adventitious (or added) sounds, and, if indicated, listen to the transmitted voice sounds (see p. XXX).

Breasts, Axillae, and Epitrochlear Nodes. In a woman, inspect the breasts with her arms relaxed, then elevated, and then with her hands pressed on her hips. In either sex, inspect the axillae and feel for the axillary nodes. Feel for the epitrochlear nodes.

A Note on the Musculoskeletal System: By this time, you have made some preliminary observations of the musculoskeletal system. You have inspected the

The patient is sitting on the edge of the bed or examining table, unless this position is contraindicated. You should be standing in front of the patient, moving to either side as needed.

The room should be darkened for the ophthalmoscopic examination. This promotes pupillary dilation and visibility of the fundi.

Move behind the sitting patient to feel the thyroid gland and to examine the back, posterior thorax, and the lungs.

The patient is still sitting. Move to the front again.

hands, surveyed the upper back, and at least in women, made a fair estimate of the shoulders' range of motion. Use these and subsequent observations to decide whether a full musculoskeletal examination is warranted. If indicated, *with the patient still sitting*, examine the hands, arms, shoulders, neck, and temporomandibular joints. Inspect and palpate the joints and check their range of motion. (*You may choose to examine upper extremity muscle bulk, tone, strength, and reflexes at this time, or you may decide to wait until later.*)

Palpate the breasts, while at the same time continuing your inspection.

Anterior Thorax and Lungs. Inspect, palpate, and percuss the chest. Listen to the breath sounds, any adventitious sounds, and, if indicated, transmitted voice sounds.

Cardiovascular System. Observe the jugular venous pulsations and measure the jugular venous pressure in relation to the sternal angle. Inspect and palpate the carotid pulsations. Listen for carotid bruits.

Inspect and palpate the precordium. Note the location, diameter, amplitude, and duration of the apical impulse. Listen at the apex and the lower sternal border with the bell of a stethoscope. Listen at each auscultatory area with the diaphragm. Listen for the first and second heart sounds and for physiologic splitting of the second heart sound. Listen for any abnormal heart sounds or murmurs.

Abdomen. Inspect, auscultate, and percuss the abdomen. Palpate lightly, then deeply. Assess the liver and spleen by percussion and then palpation. Try to feel the kidneys, and palpate the aorta and its pulsations. If you suspect kidney infection, percuss posteriorly over the costovertebral angles.

Lower Extremities. Examine the legs, assessing three systems while the patient is still supine. Each of these three systems can be further assessed when the patient stands.

With the Patient Supine

- **Peripheral Vascular System.** Palpate the femoral pulses and, if indicated, the popliteal pulses. Palpate the inguinal lymph nodes. Inspect for lower extremity edema, discoloration, or ulcers. Palpate for pitting edema.
- **Musculoskeletal System.** Note any deformities or enlarged joints. If indicated, palpate the joints, check their range of motion, and perform any necessary maneuvers.
- **Nervous System.** Assess lower extremity muscle bulk, tone, and strength; also assess sensation and reflexes. Observe any abnormal movements.

The patient position is supine. Ask the patient to lie down. You should stand at the *right side* of the patient's bed.

Elevate the head of the bed to about 30° for the cardiovascular examination, adjusting as necessary to see the jugular venous pulsations.

Ask the patient to roll partly onto the left side while you listen at the apex. Then have the patient roll back to the supine position while you listen to the rest of the heart. The patient should sit, lean forward, and exhale while you listen for the murmur of aortic regurgitation.

Lower the head of the bed to the flat position. **The patient should be supine.**

The patient is **supine**.

With the Patient Standing

The patient is **standing**. You should sit on a chair or stool.

- **Peripheral Vascular System.** Inspect for varicose veins.
- **Musculoskeletal System.** Examine the alignment of the spine and its range of motion, the alignment of the legs, and the feet.
- **Genitalia and Hernias in Men.** Examine the penis and scrotal contents and check for hernias.
- **Nervous System.** Observe the patient's gait and ability to walk heel-to-toe, walk on the toes, walk on the heels, hop in place, and do shallow knee bends. Do a Romberg test and check for pronator drift.

Nervous System. The complete examination of the nervous system can also be done at the end of the examination. It consists of the five segments described below: *mental status*, *cranial nerves* (including fundoscopic examination), *motor system*, *sensory system*, and *reflexes*.

The patient is **sitting or supine**.

Mental Status. If indicated and not done during the interview, assess the patient's orientation, mood, thought process, thought content, abnormal perceptions, insight and judgment, memory and attention, information and vocabulary, calculating abilities, abstract thinking, and constructional ability.

Cranial Nerves. If not already examined, check sense of smell, strength of the temporal and masseter muscles, corneal reflexes, facial movements, gag reflex, and strength of the trapezia and sternomastoid muscles.

Motor System. Muscle bulk, tone, and strength of major muscle groups. *Cerebellar function:* rapid alternating movements (RAMs), point-to-point movements, such as finger-to-nose (F → N) and heel-to-shin (H → S); gait.

Sensory System. Pain, temperature, light touch, vibration, and discrimination. Compare right with left sides and distal with proximal areas on the limbs.

Reflexes. Including biceps, triceps, brachioradialis, patellar, Achilles deep tendon reflexes; also plantar reflexes or Babinski reflex (see pp. XXX–XXX).

Additional Examinations. The *rectal* and *genital* examinations are often performed at the end of the physical examination. Patient positioning is as indicated.

Rectal Examination in Men. Inspect the sacrococcygeal and perianal areas. Palpate the anal canal, rectum, and prostate. If the patient cannot stand, examine the genitalia before doing the rectal examination.

The patient is **lying on his left side** for the rectal examination.

Genital and Rectal Examination in Women. Examine the external genitalia, vagina, and cervix. Obtain a Pap smear. Palpate the uterus and adnexa. Do a rectovaginal and rectal examination.

The patient is **supine in the lithotomy position**. You should be seated during examination with the speculum, then standing during bimanual examination of the uterus, adnexa, and rectum.

RECORDING YOUR FINDINGS

Now you are ready to review an actual written record documenting a patient's history and physical findings. The history and physical examination form the database for your subsequent *assessment(s)* of the patient and your *plan(s)* with the patient for management and next steps. Your written record organizes the information from the history and physical examination and should clearly communicate the patient's clinical issues to all members of the health care team. You will find that following a standardized format is the most efficient and helpful way to transfer this information. See "Recording the History and Physical Examination: The Case of Mrs. N," for an example.

Your written record should also facilitate clinical reasoning and communicate essential information to the many health professionals involved in your patient's care. Chapter 3, Clinical Reasoning, Assessment, and Plan, will provide more comprehensive information for formulating the *assessment* and *plan* and additional guidelines for documentation.

If you are a beginner, organizing the *Present Illness* may be especially challenging, but do not get discouraged. Considerable knowledge is needed to cluster related symptoms and physical signs. If you are unfamiliar with hyperthyroidism, for example, it may not be apparent that muscular weakness, heat intolerance, excessive sweating, diarrhea, and weight loss all represent a *Present Illness*. Until your knowledge and judgment grow, the patient's story and the seven key attributes of a symptom (see p. XX) are helpful and necessary guides to what to include in this portion of the record.

TIPS FOR A CLEAR AND ACCURATE WRITE-UP

You should write the record as soon as possible, before the data fade from your memory. At first, you will probably prefer to take notes when talking with the patient. As you gain experience, however, work toward recording the *Present Illness*, the *Past History*, the *Family History*, the *Personal and Social History*, and the *Review of Systems* in final form during the interview. Leave spaces for filling in details later. During the *physical examination*, make note immediately of specific measurements, such as blood pressure and heart rate. On the other hand, recording multiple items interrupts the

(continued)

TIPS FOR A CLEAR AND ACCURATE WRITE-UP (Continued)

flow of the examination, and you will soon learn to remember your findings and record them after you have finished.

Several key features distinguish a clear and well-organized written record. Pay special attention to the *order* and the *degree of detail* as you review the record below and later when you construct your own write-ups. Remember that if handwritten, a good record is always legible!

Order of the Write-Up

The order should be consistent and obvious so that future readers, including you, can easily find specific points of information. Keep subjective items of history in the history, for example, and do not let them stray into the physical examination. Offset your headings and make them clear by using indentations and spacing to accent your organization. Create emphasis by using asterisks and underlines for important points. Arrange the *present illness* in chronologic order, starting with the current episode and then filling in the relevant background information. If a patient with long-standing diabetes is hospitalized in a coma, for example, begin with the events leading up to the coma and then summarize the past history of the patient's diabetes.

Degree of Detail

The *degree of detail* is also a challenge. It should be pertinent to the subject or problem but not redundant. Review the record of Mrs. N, then turn to the checklist in Chapter 3 on pp. XXX–XXX. Decide if you think the order and detail included meet the standards of a good medical record.

**Recording the History and Physical Examination:
The Case of Mrs. N**

8/30/05 11:00 AM

Mrs. N is a pleasant, 54-year-old widowed saleswoman residing in Amarillo, Texas.

Referral. None

Source and Reliability. Self-referred; seems reliable.

Chief Complaint: "My head aches."

Present Illness: For about 3 months, Mrs. N has had increasing problems with frontal headaches. These are usually bifrontal, throbbing, and mild to moderately severe. She has missed work on several occasions because of associated nausea and vomiting. Headaches now average once a week, usually related to stress, and last 4 to 6 hours. They are relieved by sleep and putting a damp towel over the forehead. There is little relief from aspirin. No associated visual changes, motor-sensory deficits, or paresthesias.

"Sick headaches" with nausea and vomiting began at age 15, recurred throughout her mid-20s, then decreased to one every 2 or 3 months and almost disappeared.

The patient reports increased pressure at work from a new and demanding boss; she is also worried about her daughter (see *Personal and*
(continued)

Social History). Thinks her headaches may be like those in the past, but wants to be sure because her mother died of a stroke. She is concerned that they interfere with her work and make her irritable with her family. She eats three meals a day and drinks three cups of coffee per day; cola at night.

Medications. Aspirin, 1 to 2 tablets every 4 to 6 hours as needed. "Water pill" in the past for ankle swelling, none recently.

**Allergies*. Ampicillin causes rash.

Tobacco. About 1 pack of cigarettes per day since age 18 (36 pack-years).

Alcohol/drugs. Wine on rare occasions. No illicit drugs.

Past History

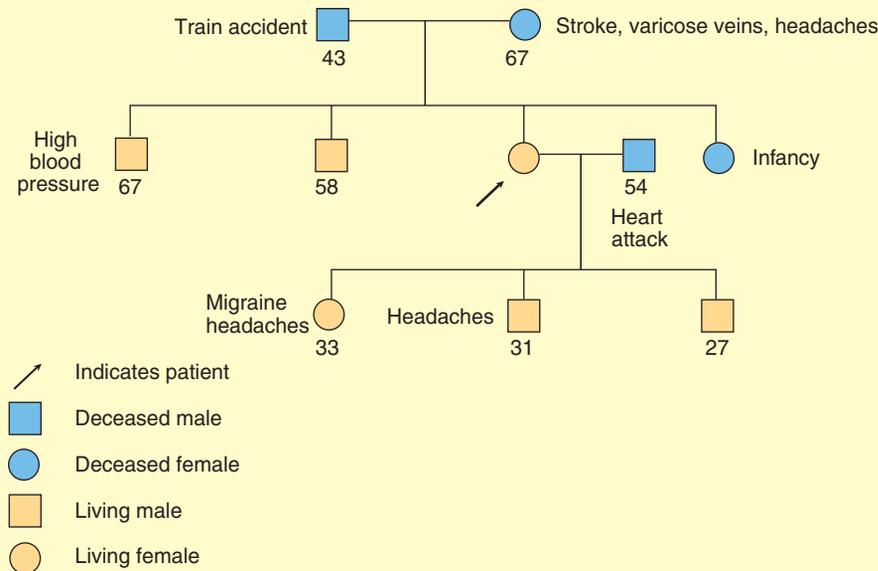
Childhood Illnesses. Measles, chickenpox. No scarlet fever or rheumatic fever.

Adult Illnesses. **Medical**: Pyelonephritis, 1982, with fever and right flank pain; treated with ampicillin; develop generalized rash with itching several days later. Reports kidney x-rays were normal; no recurrence of infection.

Surgical: Tonsillectomy, age 6; appendectomy, age 13. Sutures for laceration, 1991, after stepping on glass. **Ob/Gyn**: G3P3, with normal vaginal deliveries. 3 living children. Menarche age 12. Last menses 6 months ago. Little interest in sex, and not sexually active. No concerns about HIV infection. **Psychiatric**: None.

Health Maintenance. **Immunizations**: Oral polio vaccine, year uncertain; tetanus shots x 2, 1991, followed with booster 1 year later; flu vaccine, 2000, no reaction. **Screening tests**: Last Pap smear, 1998, normal. No mammograms to date.

Family History



The Family History: Can record as a diagram or a narrative. The diagram format is more helpful than the narrative for tracing genetic disorders. The negatives from the family history should follow either format.

*Add an asterisk or underline important points.

or

Father died at age 43 in train accident. Mother died at age 67 of stroke; had varicose veins, headaches

One brother, 61, with hypertension, otherwise well; one brother, 58, well except for mild arthritis; one sister, died in infancy of unknown cause

Husband died at age 54 of heart attack

Daughter, 33, with migraine headaches, otherwise well; son, 31, with headaches; son, 27, well

No family history of diabetes, tuberculosis, heart or kidney disease, cancer, anemia, epilepsy, or mental illness.

Personal and Social History: Born and raised in Lake City, finished high school, married at age 19. Worked as sales clerk for 2 years, then moved with husband to Amarillo, had 3 children. Returned to work 15 years ago because of financial pressures. Children all married. Four years ago Mr. N died suddenly of a heart attack, leaving little savings. Mrs. N has moved to small apartment to be near daughter, Dorothy. Dorothy's husband, Arthur, has an alcohol problem. Mrs. N's apartment now a haven for Dorothy and her 2 children, Kevin, 6 years, and Linda, 3 years. Mrs. N feels responsible for helping them; feels tense and nervous but denies depression. She has friends but rarely discusses family problems: "I'd rather keep them to myself. I don't like gossip." No church or other organizational support. She is typically up at 7:00 A.M., works 9:00 to 5:30, eats dinner alone.

Exercise and diet. Gets little exercise. Diet high in carbohydrates.

Safety measures. Uses seat belt regularly. Uses sunblock. Medications kept in an unlocked medicine cabinet. Cleaning solutions in unlocked cabinet below sink. Mr. N's shotgun and box of shells in unlocked closet upstairs.

Review of Systems

***General.** Has *gained* about 10 lb in the past 4 years.

Skin. No rashes or other changes.

Head, Eyes, Ears, Nose, Throat (HEENT). See *Present Illness*. No history of head injury. *Eyes:* Reading glasses for 5 years, last checked 1 year ago. No symptoms. *Ears:* Hearing good. No tinnitus, vertigo, infections. *Nose, sinuses:* Occasional mild cold. No hay fever, sinus trouble. **Throat (or *mouth and pharynx):* Some bleeding of gums recently. Last dental visit 2 years ago. Occasional canker sore.

Neck. No lumps, goiter, pain. No swollen glands.

Breasts. No lumps, pain, discharge. Does breast self-exam sporadically.

Respiratory. No cough, wheezing, shortness of breath. Last chest x-ray, 1986, St. Mary's Hospital; unremarkable.

Cardiovascular. No known heart disease or high blood pressure; last blood pressure taken in 1998. No dyspnea, orthopnea, chest pain, palpitations. Has never had an electrocardiogram (ECG).

***Gastrointestinal.** Appetite good; no nausea, vomiting, indigestion. Bowel movement about once daily, though sometimes has hard stools for 2 to 3 days when especially tense; no diarrhea or bleeding. No pain, jaundice, gallbladder or liver problems.

***Urinary.** No frequency, dysuria, hematuria, or recent flank pain; nocturia $\times 1$, large volume. Occasionally loses some urine when coughs hard.

Genital. No vaginal or pelvic infections. No dyspareunia.

Peripheral Vascular. Varicose veins appeared in both legs during first pregnancy. For 10 years, has had swollen ankles after prolonged standing; wears light elastic pantyhose; tried “water pill” 5 months ago, but it didn’t help much; no history of phlebitis or leg pain.

Musculoskeletal. Mild, aching, low-back pain, often after a long day’s work; no radiation down the legs; used to do back exercises but not now. No other joint pain.

Psychiatric. No history of depression or treatment for psychiatric disorders. See also *Present Illness* and *Personal and Social History*.

Neurologic. No fainting, seizures, motor or sensory loss. Memory good.

Hematologic. Except for bleeding gums, no easy bleeding. No anemia.

Endocrine. No known thyroid trouble, temperature intolerance. Sweating average. No symptoms or history of diabetes.

Physical Examination: Mrs. N is a short, overweight, middle-aged woman, who is animated and responds quickly to questions. She is somewhat tense, with moist, cold hands. Her hair is fixed neatly and her clothes are immaculate. Her color is good, and she lies flat without discomfort.

Vital Signs. Ht (without shoes) 157 cm (5’2”). Wt (dressed) 65 kg (143 lb). BMI 26. BP 164/98 right arm, supine; 160/96 left arm, supine; 152/88 right arm, supine with wide cuff. Heart rate (HR) 88 and regular. Respiratory rate (RR) 18. Temperature (oral) 98.6°F.

Skin. Palms cold and moist, but color good. Scattered cherry angiomas over upper trunk. Nails without clubbing, cyanosis.

Head, Eyes, Ears, Nose, Throat (HEENT). *Head:* Hair of average texture. Scalp without lesions, normocephalic/atramatic (NC/AT). *Eyes:* Vision 20/30 in each eye. Visual fields full by confrontation. Conjunctiva pink; sclera white. Pupils 4 mm constricting to 2 mm, round, regular, equally reactive to light. Extraocular movements intact. Disc margins sharp, without hemorrhages, exudates. No arteriolar narrowing or A-V nicking. *Ears:* Wax partially obscures right tympanic membrane (TM); left canal clear, TM with good cone of light. Acuity good to whispered voice. Weber midline. AC > BC. *Nose:* Mucosa pink, septum midline. No sinus tenderness. *Mouth:* Oral mucosa pink. Several interdental papillae red, slightly swollen. Dentition good. Tongue midline, with 3 \times 4 mm shallow white ulcer on red base on undersurface near tip; tender but not indurated. Tonsils absent. Pharynx without exudates.

Neck. Neck supple. Trachea midline. Thyroid isthmus barely palpable, lobes not felt.

Lymph Nodes. Small (<1 cm), soft, nontender, and mobile tonsillar and posterior cervical nodes bilaterally. No axillary or epitrochlear nodes. Several small inguinal nodes bilaterally, soft and nontender.

Thorax and Lungs. Thorax symmetric with good excursion. Lungs resonant. Breath sounds vesicular with no added sounds. Diaphragms descend 4 cm bilaterally.

Cardiovascular. Jugular venous pressure 1 cm above the sternal angle, with head of examining table raised to 30°. Carotid upstrokes brisk, without bruits. Apical impulse discrete and tapping, barely palpable in the 5th left interspace, 8 cm lateral to the midsternal line. Good S₁, S₂; no S₃ or S₄. A II/VI medium-pitched midsystolic murmur at the 2nd right interspace; does not radiate to the neck. No diastolic murmurs.

Breasts. Pendulous, symmetric. No masses; nipples without discharge.

Abdomen. Protuberant. Well-healed scar, right lower quadrant. Bowel sounds active. No tenderness or masses. Liver span 7 cm in right midclavicular line; edge smooth, palpable 1 cm below right costal margin (RCM). Spleen and kidneys not felt. No costovertebral angle tenderness (CVAT).

Genitalia. External genitalia without lesions. Mild cystocele at introitus on straining. Vaginal mucosa pink. Cervix pink, parous, and without discharge. Uterus anterior, midline, smooth, not enlarged. Adnexa not palpated due to obesity and poor relaxation. No cervical or adnexal tenderness. Pap smear taken. Rectovaginal wall intact.

Rectal. Rectal vault without masses. Stool brown, negative for occult blood.

Extremities. Warm and without edema. Calves supple, nontender.

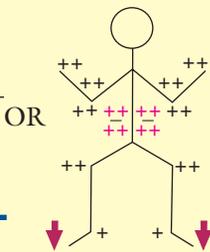
Peripheral Vascular. Trace edema at both ankles. Moderate varicosities of saphenous veins both lower extremities. No stasis pigmentation or ulcers. Pulses (2+ = brisk, or normal):

	Radial	Femoral	Popliteal	Dorsalis Pedis	Posterior Tibial
RT	2+	2+	2+	2+	2+
LT	2+	2+	2+	Absent	2+

Musculoskeletal. No joint deformities. Good range of motion in hands, wrists, elbows, shoulders, spine, hips, knees, ankles.

Neurologic. *Mental Status:* Tense but alert and cooperative. Thought coherent. Oriented to person, place, and time. *Cranial Nerves:* II–XII intact. *Motor:* Good muscle bulk and tone. Strength 5/5 throughout (see p. XXX for grading system). *Cerebellar:* Rapid alternating movements (RAMs), point-to-point movements intact. Gait stable, fluid. *Sensory:* Pinprick, light touch, position sense, vibration, and stereognosis intact. Romberg negative. *Reflexes:*

	Biceps	Triceps	Brachio-radialis	Patellar	Achilles	Plantar
RT	2+	2+	2+	2+	1+	↓
LT	2+	2+	2+	2+/2+	1+	↓



Two methods of recording may be used, depending upon personal preference: a tabular form or a stick picture diagram, as shown below and at right. 2+ = brisk, or normal; see p. XXX for grading system.

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