

# *A Practical Guide to Clinical Medicine*

## **Putting It All Together**

How do you perform the examination in a way that is complete, makes sense and yet is not awkward or prolonged? Is it OK to mix together different areas of the exam or should each system be explored as a block? As I am sure you've already recognized, these and many other related questions are not easy to answer. Putting together a smooth exam is, in fact, quite challenging. There is no single right way to perform a complete physical. The goal is to generate a method that works for you. Any technique, however, should:

1. Cover all aspects of the examination such that you have a reasonable chance of identifying any pathology that might in fact be present.
2. Be readily reproducible, allowing you to perform the exam the same way all the time.
3. Keep patient gymnastics to a minimum (i.e. limit the number of times that the patient has to get up and down).
4. Link together sections which, although disconnected physiologically, are connected spatially. It makes sense, for example, to integrate the cranial nerve and head and neck examinations as both involve the same region of the body.
5. Allow you to be efficient and perform the exam with an economy of movement (i.e. minimize the number of times that you pick up and put down instruments, move from one side of the patient to the other, etc.).

It may take a fair amount of time, thought and practice before you come up with a system that works for you. I encourage you to experiment while choreographing your own moves.

What follows is not an in-depth review detailing the specifics of each area of the exam. Rather, it is simply an outline of the "mechanical events" that make up a complete physical.

1. Wash your hands.
2. Have the patient change into a hospital gown and take a seat at the end of the examining table. If possible, spend a few minutes simply watching them.
3. Determine the blood pressure in both arms.
4. Count the pulse. Measure this at both radial arteries simultaneously. Following this, examine the hands and fingers.
5. Respiratory rate is noted while counting the pulse. Temperature is measured at the same time.
6. Feel for axillary lymph nodes.
7. Examine the scalp and head for any superficial abnormalities.
8. Feel for lymph nodes in the head and neck.
9. Have patient raise eyebrows, wrinkle forehead, close their eyes and smile (CN 7).
10. Check sensation to touch on face; Feel temporal and masseter muscles when jaw clenched (CN 5).
11. Assess extra ocular movements (cranial nerves 3, 4, & 6).  
Check visual fields and acuity (CN 2) if appropriate.

12. Using ophthalmoscope, check pupillary response to light (direct and indirect). Look for red reflex. Examine external structures of the eye.
13. Perform fundoscopy. When examining the left eye you will have to walk to the left side of the body.
14. Examine the outer and inner ears. You will again have to walk to the left side of the body to look at the left ear. Use your otoscope to view the tympanic membrane and associated structures.
15. Examine the nose.
16. Ask the patient to show their teeth and stick out their tongue. Using the otoscope and tongue depressor, examine the oral cavity. (CN 9, 10, 12).
17. Check hearing acuity, Weber, and Rinne (CN 8) if appropriate.
18. Have the patient shrug their shoulders and turn their head from side to side (CN 11).
19. Walk behind the patient and feel the thyroid gland.
20. Palpate the spine.
21. Observe, palpate, percuss and auscultate the posterior lung fields as well the right middle lobe and the lingula.
22. Walk around to the front, ask the patient to lie down, and listen to the anterior lung fields.
23. Look at the cardiac area of the chest. Then feel for the point of maximal cardiac impulse.
24. Auscultate the heart.
25. Have the patient turn their head to the left and assess for jugular venous distention.
26. Palpate the carotids.
27. Listen over the carotids.  
\*Note....Steps 19 thru 25 can be performed without ever removing your stethoscope from your ears.
28. Observe, auscultate, percuss and palpate the abdomen.
29. Feel for inguinal adenopathy and asses femoral and then popliteal pulses.
30. Examine the feet, looking for edema, ulcers, discoloration, etc. Check for dorsalis pedis and posterior tibial pulses.
31. Ask patient to sit up.
32. Assess muscle bulk, tone and strength in lower extremities.
33. Assess muscle bulk, tone and strength in upper extremities.
34. Check sensation to pin prick, light touch, vibration, and position sense in feet and lower extremities if appropriate.
35. Check sensation in upper extremities, as described for lower extremities, if appropriate.
36. Check biceps, triceps and brachioradialis reflexes.
37. Check achilles and patellar reflexes.
38. Assess for Babinski.
39. Assess cerebellar function with finger to nose and heel to shin testing.
40. Have patient stand and then walk. Observe gait. Check for Romberg's Sign.
41. For male patients, perform genital and rectal exam while they are standing.
42. For female patients, perform pelvic exam.
43. Wash your hands.

I have omitted the formal joint examination. If indicated, this can be done in concert with assessment of extremity strength towards the end of the exam.

This approach keeps the movement of the examiner to a minimum, limits the frequency with which the patient has to get up and down, allows exploration of neighboring areas of the body even if they are part of different organ systems, and is reasonably logical, thorough and efficient. There is a lot of room for flexibility.

## **A Few Thoughts Before You Go...**

The start of your clinical rotations provides you with an opportunity to finally get involved with patient care and begin in earnest the process of becoming a doctor. You'll be amazed at the speed with which you move from outsider to functioning participant amidst the swirl of activity that is clinical medicine. It is, unfortunately, quite easy to lose your sense of perspective while working in this very intense environment. In fact, you'll recognize this as a common problem among many in the medical field. A few things to think about before you get started (and perhaps refer back to as you make your journey):

1. Treat patients as you would want yourself or a family member to be cared for. This should cover not only the technical aspects of health care but also the quality and nature of your interpersonal interactions.
2. Try to avoid viewing the medical training process as a means to an end. As medical education is a life long undertaking, you've got to enjoy the journey. If not, stop and think why.
3. Do the right thing. This applies to patient care and your dealings with colleagues and other health care workers. If something feels wrong, it probably is! The rules which govern your behavior in the world outside of medicine still apply, regardless of what others say or how they might act! This can be challenging, particularly when you are fatigued, in a subordinate position or working with others who don't have the same interests.
4. Mistakes will happen. The oft referred to: "Primum Non Nocere (first do no harm)" probably sets an unreasonable expectation. You will all do harm to someone at various points in your careers. Those who claim otherwise have either not taken care of enough patients or are not being truthful. We are all human and thus all fallible. When errors occur, acknowledge them, discuss them with colleagues and the patient, make efforts to correct the fall out, and move on. Above all, try to learn from what happened and don't allow yourself to forget any relevant lessons (without at the same time torturing yourself unnecessarily). This should help you to maintain a healthy dose of humility and become a better doctor. Remember also that anyone can be a genius in retrospect. Using this information in a manner that promotes education and growth requires a sensitive touch.
5. Never be afraid to ask questions. If those that you are currently working with are unreceptive, make use of other resources (e.g. house staff, students, nurses, health care technicians, staff physicians). You can learn something from anyone.
6. There is no substitute for being thorough in your efforts to care for patients. Performing a good examination and obtaining an accurate history takes a certain

amount of time, regardless of your level of experience or ability. In addition, get in the habit of checking the primary data yourself, obtaining hard copies of outside studies, mining the old records for information, re-questioning patients when the story is unclear, and in general being tenacious in your pursuit of clinically relevant material. While this dogged search for answers is not too sexy, it is the cornerstone of good care.

7. Learn from your patients. In particular, those with chronic or unusual diseases will likely know more about their illnesses than you. Find out how their diagnosis was made, therapies that have worked or failed, disease progression, reasons for frustration or gratitude with the health care system, etc. Realize also that patients and their stories are frequently more interesting than the diseases that inhabit their bodies.
8. Become involved (within reason) in all aspects of patient care. Look at the x-ray, examine the sputum, talk with the radiologist, watch the echo being performed. This will allow you to learn more and gain insight into a particular illness/disease state that would not be well conveyed by simply reading the formal report. It will also give you an appreciation for tests and their limitations. Caring for patients is not a spectator sport. As an active participant in the health care process (rather than simply a scribe who documents events as they occur) you will not only help deliver better medical care but will also find the process to be more rewarding and enjoyable.
9. Follow up on patients that you care for in the ER, are transferred to other services, seen by sub-specialists or discharged from the hospital. This should give you a better sense of the natural history of some disease processes and allow you to confirm (or adjust) your clinical suspicions. This is particularly relevant today as patients are shuttled through the system with great speed, affording us only snap shot views of what may be complex clinical courses.
10. Keep your eyes open for other interesting things that might be going on elsewhere in the hospital/clinic. If there is a patient on another service with an interesting finding, go over and investigate, assuming it doesn't interfere with your other responsibilities and is OK with the patient and their providers. This will give you the opportunity to expand your internal library of what is both normal and abnormal.
11. Pay particular attention when things don't seem to add up. Chances are someone (you, the patient, the consultant) is missing something, a clue that the matter needs further investigation. Challenge yourself and those around you by continually asking "Why...?"
12. Before deciding that another provider is an "idiot" for adopting what seems an unorthodox or inappropriate clinical approach, assume that it is you that are short some important historical data. Give others the benefit of the doubt until you've had an opportunity to fully explore all the relevant information. And in those instances when it becomes apparent that mismanagement has occurred, focus on communication and education rather than derision and condescension.
13. Become comfortable with the phrases, "I don't know" and "I need help."
14. Try to read something medical every day. This will help you to stay abreast of new developments and provide an opportunity to become reacquainted with things that you've learned and forgotten. Medicine is less about achieving mastery than it is about reinforcing old lessons. Our individual "knowledge tanks" leak information on a daily basis. There is no way to plug the hole. Instead, you must continually replenish by adding to the top.
15. Realize that, ultimately, you are responsible for you. The quality of care that you provide is a direct result of the time and effort that you invest in the process. The distinction between good and bad medicine is generally not a function of oversight by

the patient, colleagues, or the legal system. For the most part, it's dependent on your willingness to push and police yourself.

16. You are not automatically endowed with the historical wisdom of a particular institution merely by walking through its doors. Nor does this knowledge necessarily arrive with your white coat, degree or other advanced title. Rather, this is something that's learned and earned, often on a daily basis.
17. Every once in a while, push yourself to become an expert in something. First hand knowledge is a powerful tool, one that is available to anyone willing to take the time to read through the primary data. Become informed by delving into the original literature pertaining to a particular subject. You may find that the data is robust and the rationale for a clinical approach or treatment well grounded. As frequently, I suspect you'll find instances where the data is rather shaky, and the best path not as clear as guidelines or expert opinion might suggest.
18. Be kind... to others and yourself.
19. Have fun! Remember why you went into medicine. Keep this first and foremost in your mind and periodically readjust your course so that this is always in your sites.

There is magic in medicine. It does not, however, derive solely from technology, testing, or diagnostic aptitude. Rather it more often comes from your interactions with patients, a touch on the sleeve, sitting at the bedside and treating them (if only for a few minutes) as a fellow human being and not as, "That guy with Lupus." You are all capable, right now, without additional training, of being magicians. The challenge lies in not losing track of this as you make your way in the coming years.