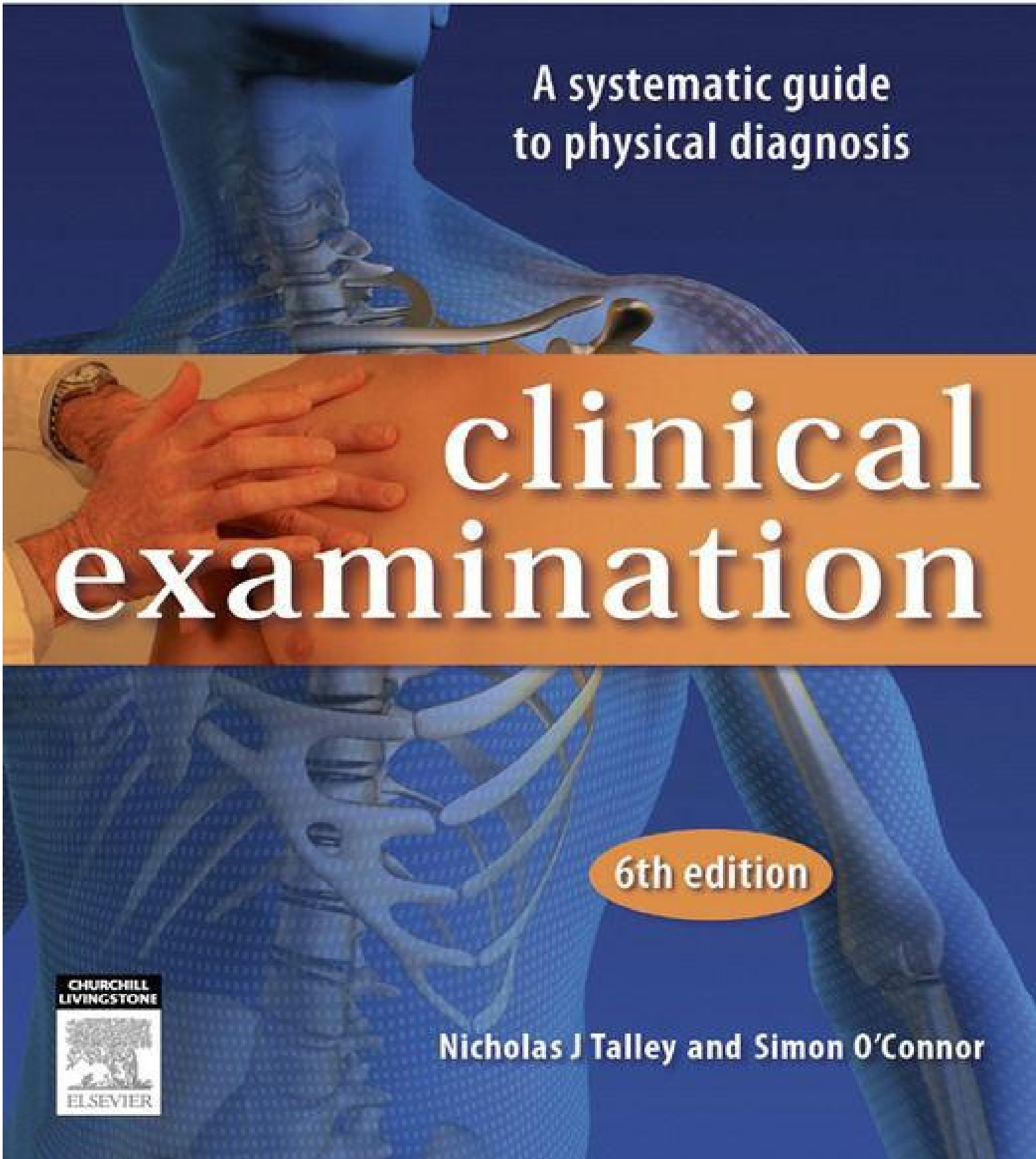

A systematic guide to physical diagnosis

clinical examination

6th edition

Nicholas J Talley and Simon O'Connor

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Clinical Examination

A Systematic Guide to Physical Diagnosis

Sixth edition

Nicholas J Talley, MD, PhD, FRACP, FRCP (London), FRCP (Edin), FAFPHM, FACP, FACG, AGAF

Professor of Medicine and Epidemiology, and Consultant Physician, Mayo Clinic, Jacksonville, Florida and Rochester, Minnesota

Visiting Professor, University of Sydney, Nepean Hospital, Penrith, NSW

Simon O'Connor, FRACP, DDU, FCSANZ

Cardiologist, The Canberra Hospital

Clinical Senior Lecturer, Australian National University Medical School, Canberra, ACT

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Foreword

The public face of modern medicine appears to celebrate medical technology and what it can do to diagnose, treat and prevent illness in individuals and communities. While this is understandable in the face of remarkable advances in medical imaging, molecular biology and bio-engineering devices, it does not reflect the very central importance of accurate clinical evaluation in the day-to-day care of people across the world. Without accurate clinical evaluation there is a risk not only to the individual (including incorrect diagnoses and unnecessary tests, procedures and treatments) but also to the financial state of healthcare systems, which in

every country of the world operate under increasing cost pressures.

There has never been a more important time than now to have superb clinical skills in history taking, physical examination and synthesis of the data gathered. The increasing age of the population and the expansion of what medicine can do for all illnesses, especially chronic disease, demands more and higher-quality care. Added to this demand is the re-emerging importance of generalist skills across all specialties of medicine, especially in primary care or family practice, emergency medicine, general internal medicine and general surgery. The reality of being able to provide high-quality care to people across metropolitan, rural and remote areas requires the knowledge and skills of the generalist who must, often under great time pressure, take a history and carry out a physical examination that will determine the next stage of investigation or treatment. Depending on the setting, there may not be much assistance from modern technology. These 'old-fashioned' skills of history taking and physical examination have been given new life in recent years by the information gained about their accuracy through clinical epidemiological research: *evidence-based clinical evaluation*.

The challenge for teachers of the art and science of clinical evaluation in the 21st century is to make it attractive and exciting for all clinicians, but especially for medical students and young doctors for whom modern technology may seem to be an alluring shortcut. In the sixth edition of their now classic book, Talley and O'Connor have written an attractive and exciting text that is a joy to read through its clarity of expression, quality of information and engagement with the reader by commentary on historical details and practical hints. The information is made easier to comprehend, assimilate and remember through judicious use of diagrams and pictures. Finally, it has the innovation of the 'Good signs guides' in each chapter giving snapshots of the evidence about how these clinical tests perform.

For over 21 years, *Clinical Examination* by Talley and O'Connor has provided medical students, junior doctors, senior doctors and clinician teachers with the guidance to carry out a rational and thoughtful history and an organised and disciplined physical examination. The information contained in this book is the basis for the hypothetico-deductive process used by most clinicians to reach a provisional diagnosis and a parsimonious list of differential diagnoses. From the first edition in 1988 to today's very different-looking but even better sixth edition, the book has stood not only the test of time but also critical appraisal by thousands of very bright people. This textbook deserves its place on the shelves and in the computers of every medical practitioner.

Michael Hensley, Professor of Medicine and Dean of Medicine, School of Medicine and Public Health, University of Newcastle, Australia

Preface

"And gladly wolde he lerne, and gladly teche."
Chaucer, the prologue to Canterbury Tales.

It is with great pride that we present to you the sixth edition of *Clinical Examination*. The book has been in continuous production for over 20 years and remains one of the most successful textbooks on examination methods in the world today. We have carefully updated and revised the text and illustrations to meet the needs of all medical students, from beginners to advanced practitioners.

Medical education has changed radically in the last decade in many countries. Various medical schools now offer post-graduate medical courses lasting four years; some offer both undergraduate and postgraduate courses, and others only train at the undergraduate level for five to six years. However long the formal training, many new topics have been added to already crowded courses. These changes have meant less emphasis in some programs on the more basic foundations of medicine, regrettably including less anatomy and physiology teaching. A clinical examination textbook cannot teach these subjects in detail, but we have felt the need to introduce basic *examination anatomy* into this book to assist students' understanding of physical examination. We have also added a number of anatomical drawings, X-rays and scans to help explain the structure of key areas being examined.

This edition includes expanded sections on history taking, including a new chapter on *advanced history taking*, and important lists of *differential diagnoses*. Features of the history that may indicate a serious or urgent problem are highlighted.

Unlike most other books teaching examination methods, we have felt it essential to provide references supporting important aspects of examination and history taking. Contemporary medical students are trained to be sceptical and expect evidence for assertions made by their teachers. These references give students the opportunity to follow up areas that interest them in more detail.

The latest evidence-based information on the value of various clinical signs has been included. This area owes much to Professor Steven McGee, and we are very grateful to him for his permission to reproduce some of his published data.

The DVD accompanying the book contains a video guide to the examination of the main systems of the body. For this edition, we have added a selection of examples of *Objective Structured Clinical Examinations* (OSCEs), a library of *electrocardiographs* (ECGs) with notes

Examinations (OSCEs), a library of *electrocardiographs* (ECGs) with notes on ECG interpretation, and a library of important *X-rays and scans*. The ECGs and scans are not a completely comprehensive set, but are an attempt to present the important abnormalities students need to recognise in clinical examinations.

Finally, we are pleased to have brought the list of eponymous signs of aortic regurgitation right up to date with the inclusion of Ashrafian's sign, first described in 2006.

Nicholas J. Talley, Simon O'Connor
Jacksonville and Canberra, December 2009

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We are particularly indebted to Dr. S. McGee, Associate Professor of Internal Medicine, University of Washington, for permission to use some of his detailed LR figures from his book, *Evidence-based physical diagnosis*, 2nd edn (Saunders, 2007) in the *Good signs guides*. Professor McGee is a pioneer in the field of evidence-based physical examination.

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Dr Mee Yoke Ling, MBBS (Hons), MPH, FRACGP

Senior Lecturer, Department of General Practice Monash University, Melbourne, Australia.

Dr Craig Mellis, MBBS, MPH, MD, FRACP

Professor of Medicine, Associate Dean & Head, Central Clinical School, Faculty of Medicine, University of Sydney & Royal Prince Alfred Hospital, Sydney, Australia.

Dr John Kolbe, MBBS, FRACP

Head, Dept of Medicine, Faculty of Medical and Health Sciences, University of Auckland Respiratory Physician, Auckland City Hospital, Auckland, New Zealand.

Dr Steve Trumble, MBBS, MD, FRACGP

Associate Professor, Medical Education Unit, The Melbourne Medical School, University of Melbourne, Victoria, Australia

Dr Andy Wearn, MBChB, MMedSc, MRCGP

Director/Senior Lecturer, Clinical Skills Resource Centre, Faculty of Medical & Health Sciences, The University of Auckland, Auckland, New Zealand.

Dr Neil Scholes, MB ChB FRACS FRCS FRCSE

Senior Lecturer/Academic Coordinator, Rural School of Medicine, University of Queensland

Director of Surgery, Rockhampton Hospital, Central Queensland, Australia

Dr Jonathan Dent, BSc(med), MB, BS

Advanced Trainee in Geriatric Medicine, St Vincent's Hospital, Sydney, Australia

Dr Stephen Allison, MBBS, FRACS

Senior Lecturer, Dept of Surgery, University of Queensland

Director of Surgery, Greenslopes Private Hospital, Brisbane, Australia

Clinical methods: an historical perspective

> The best physician is the one who is able to differentiate the possible and the impossible.
> *Herophilus of Alexandria*

From classical Greek times interrogation of the patient has been considered most important because disease was, and still is, viewed in terms of the discomfort it causes. However, the current emphasis on the use of history taking and physical examination for diagnosis developed only in the 19th century. Although the terms 'symptoms and signs' have been part of the medical vocabulary since the revival of classical medicine, until relatively recently they were used synonymously.

During the 19th century, the distinction between *symptoms* (subjective complaints, which the clinician learns from the patient's account of his or her feelings) and *signs* (objective morbid changes detectable by the clinician) evolved.

Until the 19th century, diagnosis was empirical and based on the classical Greek belief that all disease had a single cause, an imbalance of the four humours (yellow bile, black bile, blood and phlegm). Indeed the Royal College of Physicians, founded in London in 1518, believed that clinical experience without classical learning was useless, and physicians who were College members were fined if they ascribed to any other view.

At the time of Hippocrates (460–375 BC) observation (inspection) and feeling (palpation) had a place in the examination of patients. The ancient Greeks, for example, noticed that patients with jaundice often had an enlarged liver that was firm and irregular. Shaking a patient and listening for a fluid splash was also recognised by the Greeks.

Herophilus of Alexandria (335–280 BC) described a method of taking the pulse in the 4th century BC. However, it was Galen of Pergamum (130–200 AD) who established the pulse as one of the major physical signs, and it continued to have this important role up to the 18th century, with minute variations being recorded. These variations were erroneously considered to indicate changes in the body's harmony.

William Harvey's (1578–1657) studies of the human circulation, published in 1628, had little effect on the general understanding of the value of the pulse as a sign. Sanctorius (1561–1636) was the first to time the pulse using a clock, while John Floyer (1649–1734) invented the pulse watch in 1707 and made regular observations of the pulse rate. Abnormalities in heart rate were described in diabetes mellitus in 1776 and in thyrotoxicosis in 1786.

Fever was studied by Hippocrates and was originally regarded as an

entity rather than a sign of disease. The thermoscope was devised by Sanctorius in 1625. In association with Gabriel Fahrenheit (1686–1736), Hermann Boerhaave (1668–1738) introduced the thermometer as a research instrument and this was produced commercially in the middle of the 18th century.

In the 13th century Johannes Actuarius (d. 1283) used a graduated glass to examine the urine. In Harvey's time a specimen of urine was sometimes looked at (inspected) and even tasted, and was considered to reveal secrets about the body. Harvey recorded that sugar diabetes (mellitus) and dropsy (oedema) could be diagnosed in this way. The detection of protein in the urine, which Frederik Dekkers (1644–1720) first described in 1673, was ignored until Richard Bright (1789–1858) demonstrated its importance in renal disease. Although Celsus described and valued measurements such as weighing and measuring a patient in the 1st century AD, these methods became widely used only in the 20th century.

A renaissance in clinical methods began with the concept of Battista Morgagni (1682–1771) that disease was not generalised but arose in organs, a conclusion published in 1761. Leopold Auenbrugger invented chest tapping (percussion) to detect disease in the same year. Van Swieten, his teacher, in fact used percussion to detect ascites. The technique was forgotten for nearly half a century until Jean Corvisart (1755–1821) translated Auenbrugger's work in 1808.

The next big step occurred with René Laënnec (1781–1826), a student of Corvisart. He invented the stethoscope in 1816 (at first merely a roll of stiff paper) as an aid to diagnosing heart and lung disease by listening (auscultation). This revolutionised chest examination, partly because it made the chest accessible in patients too modest to allow a direct application of the examiner's ear to the chest wall, as well as allowing accurate clinicopathological correlations. William Stokes (1804–78) published the first treatise in English on the use of the stethoscope in 1825. Josef Skoda's (1805–81) investigations of the value of these clinical methods led to their widespread and enthusiastic adoption after he published his results in 1839.

These advances helped lead to a change in the practice of medicine. Bedside teaching was first introduced in the Renaissance by Montanus (1498–1552) in Padua in 1543. In the 17th century, physicians based their opinion on a history provided by an apothecary (assistant) and rarely saw the patients themselves. Thomas Sydenham (1624–89) began to practise more modern bedside medicine, basing his treatment on experience and not theory, but it was not until a century later that the scientific method brought a systematic approach to clinical diagnosis.

This change began in the hospitals of Paris after the French Revolution, with recognition of the work of Morgagni, Corvisart, Laënnec and others. Influenced by the philosophy of the Enlightenment, which suggested that a

influenced by the philosophy of the Enlightenment, which suggested that a rational approach to all problems was possible, the Paris Clinical School combined physical examination with autopsy as the basis of clinical medicine. The methods of this school were first applied abroad in Dublin, where Robert Graves (1796–1853) and William Stokes worked. Later at Guy's Hospital in London the famous trio of Richard Bright, Thomas Addison (1793–1860) and Thomas Hodgkin (1798–1866) made their important contributions. In 1869 Samuel Wilks (1824–1911) wrote on the nail changes in disease and the signs he described remain important. Carl Wunderlich's (1815–77) work changed the concept of temperature from a disease in itself to a symptom of disease.

Spectacular advances in physiology, pathology, pharmacology and the discovery of microbiology in the latter half of the 19th century led to the development of the new 'clinical and laboratory medicine', which is the rapidly advancing medicine of the present day. The modern systematic approach to diagnosis, with which this book deals, is still, however, based on taking the history and examining the patient by looking (inspecting), feeling (palpating), tapping (percussing) and listening (auscultating).

Suggested reading

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The Hippocratic oath

I swear by Apollo the physician, and Aesculapius, and Hygieia, and Panacea, and all the gods and goddesses that, according to my ability and judgment, I will keep this Oath and this stipulation:

To reckon him who taught me this Art equally dear to me as my parents, to share my substance with him and relieve his necessities if required; to look upon his offspring in the same footing as my own brother, and to teach them this Art, if they shall wish to learn it, without fee or stipulation, and that by precept, lecture, and every other mode of instruction,

I will impart a knowledge of the Art to my own sons and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others.

I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any if asked, nor suggest any such counsel; and in like manner I will not give a woman a pessary to produce abortion.

With purity and with holiness I will pass my life and practise my Art. I will not cut persons labouring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption; and further from the seduction of females or males, of freemen and slaves.

Whatever, in connection with my professional practice, or not in connection with it, I may see or hear in the lives of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated may it be granted to me to enjoy life and the practice of the Art, respected by all men, in all times! But should I trespass and violate this Oath, may the reverse be my lot!

Hippocrates, born on the Island of Cos (460?–357 BC) is agreed by everyone to be the father of medicine. He is said to have lived to the age of 109.

Many of the statements in this ancient oath remain relevant today, while others, such as euthanasia and abortion, remain controversial. The seduction of slaves, however, is less of a problem.

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Reeves & Maibach: From Reeves JT and Maibach H, *Clinical dermatology illustrated: a regional approach*, 3rd edn. McLennan & Petty: Sydney, 2000, with permission.

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Chapter 3

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Chapter 5

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Chapter 16

45816.1,16.2 Reeves & Maibach. **458**16.3,16.4 Mayo Clinic. **459**16.5,16.6 Dr Chris Kennedy & Prof. Ian Constable © Lions Eye Institute, Perth.

Table of Contents

Chapter 1

The general principles of history taking

> Medicine is learned by the bedside and not in the classroom.
> *Sir William Osler (1849–1919)*

An extensive knowledge of medical facts is not useful unless a doctor is able to extract accurate and succinct information from a sick person about his or her illness. In all branches of medicine, the development of a rational plan of management depends on a correct diagnosis or sensible, differential diagnosis (list of possible diagnoses). Except for patients who are extremely ill, taking a careful medical history should precede both examination and treatment. A medical history is the first step in making a diagnosis; it will often help direct the physical examination and will usually determine what investigations are appropriate. More often than not, an accurate history suggests the correct diagnosis, whereas the physical examination and subsequent investigations merely serve to confirm this impression.[1,2] The history is also, of course, the least expensive way of making a diagnosis.

Changes in medical education mean that much student teaching is now conducted away from the traditional hospital ward. Students must still learn how to take a thorough medical history, but obviously adjustments to the

how to take a thorough medical history, but obviously adjustments to the technique must be made for patients seen in busy surgeries or outpatient departments. Much information about a patient's previous medical history may already be available in hospital or clinic records; the detail needed will vary depending on the complexity of the presenting problem and whether the visit is a follow-up or a new consultation. All students must, however, have a comprehensive understanding of how to take a complete medical history.

Bedside manner and establishing rapport

History taking requires practice and depends very much on the doctor–patient relationship.[3] It is important to try to put the patient at ease immediately, because unless a rapport is established, the history taking is likely to be unrewarding.

There is no doubt that the treatment of a patient begins the moment one reaches the bedside or the patient enters the consulting rooms. The patient's first impressions of a doctor's professional manner will have a lasting effect. One of the axioms of the medical profession is *primum non nocere* (the first thing is to cause no harm).[4] An unkind and thoughtless approach to questioning and examining a patient can cause harm before any treatment has had the opportunity to do so. You should aim to leave the patient feeling better for your visit. This is a difficult technique to teach. Much has been written about the correct way to interview patients, but each doctor has to develop his or her own method, guided by experience gained from clinical teachers and patients.[5-8]

To help establish this good relationship, the student or doctor must make a deliberate point of introducing him- or herself and explaining his or her role. This is especially relevant for students or junior doctors seeing patients in hospital. A student might say: 'Good afternoon, Mrs Evans. My name is Jane Smith; I am Dr Osler's medical student. She has asked me to come and see you.' A patient seen at a clinic should be asked to come and sit down, and be directed to a chair. The door should be shut or, if the patient is in the ward, the curtains drawn to give some privacy. The clinician should sit down beside or near the patient so as to be close to eye level and give the impression that the interview will be an unhurried one.[9,10] It is important here to address the patient respectfully and use his or her name and title. Some general remarks about the weather, hospital food or the crowded waiting room may be appropriate to help put the patient at ease, but these must not be patronising.

Obtaining the history

Allow the patient to tell the whole story, then ask questions to fill in the gaps. Always listen carefully. At the end of the history and examination, a detailed record is made. However, many clinicians find it useful to make rough notes during the interview. With practice this can be done without loss of rapport. In fact, pausing to make a note of a patient's answer to a question suggests that it is being taken seriously.

Many clinics and hospitals use computer records which may be displayed on a computer screen on the desk. Notes are sometimes added to these during the interview via a keyboard. It can be very off-putting for a patient when the interviewing doctor looks entirely at the computer screen rather than at the patient. With practice it is possible to enter data while maintaining eye contact with a patient, but at first it is probably preferable in most cases to make written notes and transcribe them later.

The final record must be a sequential, accurate account of the development and course of the illness or illnesses of the patient (Appendix I, page 461). There are a number of methods of recording this information. Hospitals may have printed forms with spaces for recording specific information. This applies especially to routine admissions (e.g. for minor surgical procedures). Follow-up consultation questions and notes will be briefer than those of the initial consultation; obviously, many questions are only relevant for the initial consultation. When a patient is seen repeatedly at a clinic or in a general practice setting, the current presenting history may be listed as an 'active' problem and the past history as a series of 'inactive' or 'still active' problems.

A sick patient will sometimes emphasise irrelevant facts and forget about very important symptoms. For this reason, a systematic approach to history taking and recording is crucial (Table 1.1).[11]

Table 1.1 History-taking sequence

1 Presenting (principal) symptom (PS)
2 History of presenting illness (HPI) Details of current illnesses

Details of current illnesses Details of previous similar episodes Current treatment and drug history Menstrual and reproductive history for women Extent of functional disability
3 Past history (PH) Past illnesses and surgical operations Past treatments Allergies Blood transfusions
4 Social history (SH) Occupation, education Smoking, alcohol, analgesic use Overseas travel, immunisation Marital status, social support Living conditions
5 Family history (FH)
6 Systems review (SR) See Questions box 1.1, page 9
Also refer to Appendix I.

Introductory questions

In order to obtain a good history the clinician must establish a **good relationship**, interview in a **logical manner**, **listen** carefully, **interrupt** appropriately, note **non-verbal clues**, and **correctly interpret** the information obtained.

The next step after introducing oneself should be to find out the patient's major symptoms or medical problems. Asking the patient 'What brought you here today?' can be unwise, as it often promotes the reply 'an ambulance' or 'a car'. This little joke wears thin after some years in clinical practice. It is best to attempt a conversational approach and ask the patient 'What has been the trouble or problem recently?' or 'When were you last quite well?' For a follow-up consultation some reference to the last visit is appropriate, for example: 'How have things been going since I saw you last?' or 'It's about … weeks since I saw you last, isn't it? What's been happening since then?' This lets the patient know the clinician hasn't forgotten him or her. Some writers suggest the clinician begin with questions to the patient about more general aspects of his or her life. There is a danger that this attempt to establish early rapport will seem intrusive to a person who has come for help about a specific problem, albeit one related to other aspects of his or her life. This type of general and personal information may be better approached once the clinician has shown an interest in the presenting problem or as part of the social history. The best approach and timing of this part of the interview must vary, depending on the nature of the presenting problem and the patient's and clinician's attitude. Encourage patients to tell their story in their own words from the onset of the first symptom to the present time.

When a patient stops volunteering information, the question '**What else?**' may start things up again.[8] However, some direction may be necessary to keep a garrulous patient on track later during the interview. It is necessary to ask specific questions to test diagnostic hypotheses. For example, the patient may not have noticed an association between the occurrence of chest discomfort and exercise (typical of angina) unless asked specifically. It may also be helpful to give a list of possible answers. A patient with suspected angina who is unable to describe the symptom may be asked if the sensation was sharp, dull, heavy or burning. The reply that it was burning makes angina less likely.

Appropriate (but not exaggerated) reassuring gestures are of value to maintain the flow of conversation. If the patient stops giving the story spontaneously, it can be useful to provide a short summary of what has already been said and encourage him or her to continue.

The clinician must learn to listen with an open mind.[10] The temptation to leap to a diagnostic decision before the patient has had the chance to

describe all the symptoms in his or her own words should be resisted. Avoid using pseudo-medical terms; and if the patient uses these, find out exactly what is meant by them, as misinterpretation of medical terms is common.

Patients' descriptions of their symptoms may vary as they are subjected to repeated questioning by increasingly senior medical staff. The patient who has described his chest pain as sharp and left-sided to the medical student may tell the registrar that the pain is dull and in the centre of the chest. These discrepancies come as no surprise to experienced clinicians; they are sometimes the result of the patient's having had time to reflect on his or her symptoms. This does mean, however, that very important aspects of the story should be checked by asking follow-up questions, such as: 'Can you show me exactly where the pain is?' and 'What do you mean by sharp?'

Some patients may have medical problems that make the interview difficult for them; these include deafness and problems with speech and memory. These must be recognised by the clinician if the interview is to be successful. See Chapter 2 for more details.

The presenting (principal) symptom

Not uncommonly, a patient has many symptoms. An attempt must be made to decide which symptom led the patient to present. It must be remembered that the patient's and the doctor's ideas of what constitutes a serious problem may differ. A patient with symptoms of a cold who also, in passing, mentions that he has recently had severe crushing retrosternal chest pain needs more attention to his heart than to his nose. Record each presenting symptom in the patient's own words, avoiding technical terms.

History of the presenting illness

Each of the presenting problems has to be talked about in detail with the patient, but in the first part of the interview the patient should lead the discussion. In the second part the doctor should take more control and ask specific questions. When writing down the history of the presenting illness, the events should be placed in chronological order; this might have to be done later when the whole history has been obtained. If numerous systems are affected, the events should be placed in chronological order for each system.

Current symptoms

Certain information should routinely be sought for each current symptom if this hasn't been volunteered by the patient. The mnemonic SOCRATES summarises the questions that should be asked about most symptoms:

- **S**ite
- **O**nset
- **C**haracter
- **R**adiation (if pain or discomfort)
- **A**lleviating factors
- **T**iming
- **E**xacerbating factors
- **S**everity.

Site

Ask where the symptom is exactly and whether it is localised or diffuse. Ask the patient to point to the actual site on the body.

Some symptoms are not localised. Patients who complain of dizziness do not localise this to any particular site—but vertigo may sometimes involve a feeling of movement within the head and to that extent is localised. Other symptoms that are not localised include cough, shortness of breath (dyspnoea), or change in weight.

Onset (Mode of onset and pattern)

Find out whether the symptom came on rapidly, gradually or instantaneously. Some cardiac arrhythmias are of instantaneous onset and offset. Sudden loss of consciousness (syncope) with immediate recovery occurs with cardiac but not neurological disease. Ask whether the symptom has been present continuously or intermittently. Determine if the symptom is getting worse or better, and, if so, when the change occurred. For example, the exertional breathlessness of chronic obstructive pulmonary disease may come on with less and less activity as it worsens. Find out what the patient was doing at the time the symptom began. For example, severe breathlessness that wakes a patient from sleep is very suggestive of cardiac failure.

Character

Here it is necessary to ask the patient what is meant by the symptom; to describe its character. If the patient complains of dizziness, does this mean the room spins around (vertigo) or is it more a feeling of light-headedness? Does indigestion mean abdominal pain, heartburn, excess wind or a change in bowel habit? If there is pain, is it sharp, dull, stabbing, boring, burning or cramp-like?

Radiation of pain or discomfort

Determine whether the symptom, if localised, radiates; this mainly applies if the symptom is pain. Certain patterns of radiation are typical of a condition or even diagnostic, e.g. the nerve root distribution of pain associated with herpes zoster (shingles).

Alleviating factors

Ask whether anything makes the symptom better. For example, the pain of pericarditis may be relieved when a patient sits up. Have analgesic medications been used to control the pain? Have narcotics been required?

Timing

Find out when the symptom first began and try to date this as accurately as possible. For example, ask the patient what was the first thing he or she noticed that was ‘unusual’ or ‘wrong’. Ask whether the patient has had a similar illness in the past. It is often helpful to ask patients when they last felt entirely well. In a patient with long-standing symptoms, ask why he or she decided to come and see the doctor at this time.

Exacerbating factors

Ask if anything makes the pain or symptom worse. The slightest movement may exacerbate the abdominal pain of peritonitis or the pain in the big toe caused by gout.

Severity

This is subjective. The best way to assess severity is to ask the patient whether the symptom interferes with normal activities or sleep. Severity can be graded from mild to very severe. A mild symptom can be ignored by the patient, while a moderate symptom cannot be ignored but does not interfere with daily activities. A severe symptom interferes with daily activities, while a very severe symptom markedly interferes with most activities. Alternatively, pain or discomfort can be graded on a 10-point scale from 0 (no discomfort) to 10 (unbearable).

The severity of some symptoms can be quantified more precisely; for example, shortness of breath on exertion occurring after walking 10 metres on flat ground is more severe than shortness of breath occurring after walking 90 metres up a hill. Central chest pain from angina occurring at rest is more significant than angina occurring while running 90 metres to catch a bus.

It is crucial to quantify accurately the severity of each symptom—but also to remember that symptoms a patient considers mild may be very significant.

Associated symptoms

Here an attempt is made to uncover in a systematic way symptoms that might be expected to be associated with disease of a particular area. Initial and most thorough attention must be given to the system that includes the presenting complaint (see *Questions box 1.1*, page 9). Remember that while a single symptom may provide the clue that leads to the correct diagnosis, usually it is the combination of characteristic symptoms that most reliably suggests the diagnosis.

Questions box 1.1

The systems review

Enquire about common symptoms and three or four of the common disorders in each major system listed below. Not all these questions should be asked of every patient. Adjust the detail of questions based on the presenting problem, the patient's age and the answers to the preliminary questions.

! denotes symptoms for the possible diagnosis of an urgent or dangerous (alarm) problem.

Cardiovascular system

1. Have you had any pain or pressure in your chest, neck or arm?—Myocardial ischaemia

2. Are you short of breath on exertion? How much exertion is necessary?

3. Have you ever woken up at night short of breath?—Cardiac failure

4. Can you lie flat without feeling breathless?

5. Have you had swelling of your ankles?

6. Have you noticed your heart racing or beating irregularly?

7. Have you had blackouts without warning?—Stokes-Adams attacks

8. Have you felt dizzy or blacked out when exercising?—Severe aortic stenosis or hypertrophic cardiomyopathy

9. Do you have pain in your legs on exercise?

10. Do you have cold or blue hands or feet?

11. Have you ever had rheumatic fever, a heart attack, or high blood pressure?

Respiratory system

1. Are you ever short of breath? **Has this come on suddenly?**—Pulmonary embolism

2. Have you had any cough?

3. Is your cough associated with shivers and shakes (rigors) and breathlessness and chest pain?—Pneumonia

4. Do you cough up anything?

5. Have you coughed up blood?—Bronchial carcinoma

6. What type of work have you done?—Occupational lung disease

7. Do you snore loudly? Do you fall asleep easily during the day? When? Have you fallen asleep while driving? (Sleep history)

8. Do you ever have wheezing when you are short of breath?

9. Have you had fevers?

9. Have you had fevers?

10. Do you have night sweats?

11. Have you ever had pneumonia or tuberculosis?

12. Have you had a recent chest X-ray?

13. Have you had any bleeding or discharge from your breasts or felt any lumps there?—Carcinoma of the breast

Gastrointestinal system

1. Are you troubled by indigestion?

2. Do you have heartburn?

3. Have you had any difficulty swallowing?—Oesophageal cancer

4. Have you had nausea or vomiting, or vomited blood?—Gastrointestinal bleeding

5. Have you had pain or discomfort in your abdomen?

6. Have you had any abdominal bloating or distension?

7. Has your bowel habit changed recently?—Carcinoma of the colon

8. How many bowel motions a week do you usually pass?

9. Have you lost control of your bowels or had accidents (faecal incontinence)?

10. Have you seen blood in your motions or vomited blood?—Gastrointestinal bleeding

11. Have your bowel motions been black?—Gastrointestinal bleeding

12. Have you lost weight recently without dieting?—Carcinoma of the colon

13. Have your eyes or skin ever been yellow?

14. Have you ever had hepatitis, peptic ulceration, colitis, or bowel cancer?

15. Tell me about your diet recently.

Genitourinary system

1. Do you have difficulty or pain on passing urine?

2. Is your urine stream as good as it used to be?

3. Is there a delay before you start to pass urine? (Applies mostly to men)

4. Is there dribbling at the end?

5. Do you have to get up at night to pass urine?

6. Are you passing larger or smaller amounts of urine?

7. Has the urine colour changed?

8. Have you seen blood in your urine?—Urinary tract malignancy

9. Have you any problems with your sex life? Difficulty obtaining or maintaining an erection?

10. Have you noticed any rashes or lumps on your genitals?

11. Have you ever had a sexually transmitted disease?

12. Have you ever had a urinary tract infection or kidney stone?

13. Are your periods regular?

14. Do you have excessive pain or bleeding with your periods?

Haematological system

1. Do you bruise easily?

2. Have you had fevers, or shivers and shakes (rigors)?

3. Do you have difficulty stopping a small cut from bleeding?—Bleeding disorder

4. Have you noticed any lumps under your arms, or in your neck or groin?—Haematological malignancy !

5. Have you ever had blood clots in your legs or in the lungs?

Musculoskeletal system

1. Do you have painful or stiff joints?

2. Are any of your joints red, swollen and painful?—Septic arthritis

3. Have you had a skin rash recently?

4. Do you have any back or neck pain?

5. Have your eyes been dry or red?

6. Have you ever had a dry mouth or mouth ulcers?

7. Have you been diagnosed as having rheumatoid arthritis or gout?

8. Do your fingers ever become painful and become white and blue in the cold?

Endocrine system

1. Have you noticed any swelling in your neck?

2. Do your hands tremble?

3. Do you prefer hot or cold weather?

4. Have you had a thyroid problem or diabetes?

5. Have you noticed increased sweating?

6. Have you been troubled by fatigue?

7. Have you noticed any change in your appearance, hair, skin or voice?

8. Have you been unusually thirsty lately?—New onset of diabetes

Reproductive history (women)

1. How many pregnancies have you had?

2. Have you had any miscarriages?

3. Have you had high blood pressure or diabetes in pregnancy?

4. Were there any other complications during your pregnancies or deliveries?

5. Have you had a Caesarean section?

Neurological system and mental state

1. Do you get headaches?

2. Is your headache very severe and did it begin very suddenly?—Sub-arachnoid haemorrhage

3. Have you had memory problems or trouble concentrating?

4. Have you had fainting episodes, fits or blackouts?

5. Do you have trouble seeing or hearing?

6. Are you dizzy?

7. Have you had weakness, numbness or clumsiness in your arms or legs?

8. Have you ever had a stroke or head injury?

9. Have you had difficulty sleeping?

10. Do you feel sad or depressed, or have problems with your 'nerves'?

11. Have you ever been sexually or physically abused?

The elderly patient

1. Have you had problems with falls or loss of balance?—High fracture risk

2. Do you walk with a frame or stick?

3. Do you take sleeping tablets or sedatives? —Falls risk

4. Do you take blood pressure tablets?—Postural hypotension and falls risk

5. Have you been tested for osteoporosis?

6. Can you manage at home without help?

7. Are you affected by arthritis?

8. Have you had problems with your memory or with managing things like paying bills?—Cognitive decline

9. How do you manage your various tablets?—Risk of polypharmacy and confusion of doses

Concluding the interview

Current treatment and drug allergies

Ask the patient whether he or she is currently taking any tablets or medicines (the use of the word 'drug' may cause alarm); the patient will often describe these by colour or size rather than by name and dose. Then ask the patient to show you all his or her medications, if possible, and list them. Note the dose, length of use, and the indication for each drug. This list may provide a useful clue to chronic or past illnesses, otherwise forgotten. Remember that some drugs are prescribed as transdermal patches or subcutaneous implants (e.g. contraceptives and hormonal treatment of carcinoma of the prostate). Ask whether the drugs were taken as prescribed. Always ask specifically whether a woman is taking the contraceptive pill, because this is not considered a medicine or tablet by many who take it. The same is true of inhalers, or what many patients call their 'puffers'.

To remind the patient, it is often useful to ask about the use of classes of drugs. A basic list should include questions about treatment for blood pressure, high cholesterol, diabetes, arthritis, anxiety or depression, impotence, contraception, hormone replacement, epilepsy, anticoagulation and the use of antibiotics. Also ask the patient if he or she is taking any over-the-counter preparations (e.g. aspirin, antihistamines, vitamins). Aspirin and standard non-steroidal anti-inflammatory drugs (NSAIDs), but not paracetamol, can cause gastrointestinal bleeding. Patients with chronic pain may consume large amounts of analgesics, including drugs containing opioids such as codeine or morphine. A careful history of the period of use of opioids and the quantities used is important because they are drugs of dependence.

Approximately 50% of people now use 'natural remedies' of various types. They may not feel these are a relevant part of their medical history, but these chemicals, like any drug, may have adverse effects. Indeed, some of these have been found to be adulterated with drugs such as steroids and NSAIDs. More information about these substances and their effects is becoming available and there is an increasing responsibility for clinicians to be aware of them.

There may be some medications or treatments the patient has had in the past which remain relevant. These include corticosteroids, chemotherapeutic agents (anti-cancer drugs) and radiotherapy. Often patients, especially those with a chronic disease, are very well informed about their condition and their treatment. However, some allowance must be made for patients' non-

medical interpretation of what happened.[10]

Note any **adverse reactions** in the past. Also ask specifically about any **allergy to drugs** (often a skin reaction or episode of bronchospasm) and what the allergic reaction actually involved, to help judge if it was really an allergic reaction.[12] The patient often confuses an allergy with a side-effect of a drug.

Ask about 'recreational' drug use. The use of intravenous drugs has many implications for the patient's health. Ask whether any attempt has been made to avoid sharing needles. This may protect against the injection of viruses, but not against bacterial infection from the use of impure substances.

Not all medical problems are treated with drugs. Ask about courses of physiotherapy or rehabilitation for musculoskeletal problems or injuries, or to help recovery following surgery or a severe illness. Certain gastrointestinal conditions are treated with dietary supplements (e.g. pancreatic enzymes for chronic pancreatitis) or restrictions (e.g. of gluten for coeliac disease).

Menstrual history

For women, a menstrual history should be obtained; it is particularly relevant for a patient with abdominal pain, a suspected endocrine disease or genitourinary symptoms. Write down the date of the last menstrual period. Ask about the age at which menstruation began, if the periods are regular, or whether menopause has occurred. Ask if the symptoms are related to the periods. Do not forget to ask a woman of childbearing age if there is a possibility of pregnancy; this, for example, may preclude the use of certain investigations or drugs.[13] Observing the well-known axiom that 'every woman of childbearing years is pregnant until proven otherwise' can prevent unnecessary danger to the unborn child and avoid embarrassment for the unwary clinician. Ask about any miscarriages. Record *gravida* (the number of pregnancies) and *para* (the number of births of babies over 20 weeks' gestation).

The effect of the illness

A serious illness can change a person's life—for example, a chronic illness may prevent work or further education. The psychological and physical effects of a serious health problem may be devastating and, of course, people respond differently to similar problems. Even after full recovery from a life-threatening illness, some people may be permanently affected by loss of confidence or self-esteem. There may be continuing anxieties about the capability of supporting a family. Try to find out how the patient and his or

capability of supporting a family. Try to find out how the patient and his or her family have been affected. How has he or she coped so far, and what are the patient's expectations and hopes for the future with regard to health? What explanations of the condition has the patient been given or obtained (e.g. from the internet)?

Helping a patient manage ill-health is a large part of the clinician's duty. This depends on sympathetic and realistic explanations of the probable future course of the disease and the effects of treatment.

The past history

Ask the patient whether he or she has had any serious illnesses, operations or admissions to hospital in the past. Don't forget to inquire about childhood illnesses and any obstetric or gynaecological problems. Previous illnesses or operations may have a direct bearing on the current health of the patient. It is worth asking specifically about certain operations that have a continuing effect on the patient's health; for example, operations for malignancy, bowel surgery or cardiac surgery—especially valve surgery. Implanted prostheses are common in surgical, orthopaedic and cardiac procedures. These may involve a risk of infection of the foreign body, while magnetic metals—especially cardiac pacemakers—are a contraindication to magnetic resonance imaging (MRI). Chronic kidney disease may be a contraindication to X-rays using iodine contrast materials and MRI scanning using gadolinium contrast. Pregnancy is usually a contraindication to radiation exposure (X-rays and nuclear scans—remember that CT scans cause hundreds of times the radiation exposure of simple X-rays).

The patient may believe that he or she has had a particular diagnosis made in the past, but careful questioning may reveal this as unlikely. For example, the patient may mention a previous duodenal ulcer, but not have had any investigations or treatment for it, which makes the diagnosis less certain. Therefore it is important to obtain the particulars of each relevant past illness, including the symptoms experienced, tests performed and treatments prescribed.

Patients with chronic illnesses such as diabetes mellitus will probably have had their condition managed with the help of various doctors and at specialised clinics where diabetic educators, nurses and dieticians will have had a primary role in management of the illness. Find out what supervision and treatment these have provided. For example, who does the patient contact if there is a problem with the insulin dose, and does the patient know what to do (an action plan) if there is an urgent or dangerous complication? Patients with chronic diseases are often very much involved in their own care and are very well informed about aspects of their treatment. For example,

diabetics should keep records of their home-measured blood sugar levels; heart failure patients should monitor their weight daily, and so on. These patients will often make their own adjustments to their medication doses. Assessing a patient's understanding of and confidence in making these changes should be part of the history taking.

The social and personal history

This is the time to find out more about the patient as a person. The questions should be asked in an interested and conversational way and should not sound like a routine learned by rote. This history includes the whole economic, social, domestic and industrial situation of the patient. Ask first about the places of birth and residence, and the level of education obtained. Recent migrants may have been exposed to infectious diseases like tuberculosis; ethnic background is important in some diseases, such as thalassaemia and sickle cell anaemia.

Smoking

The patient may claim to be a non-smoker if he or she stopped smoking that morning. Therefore, ask whether the patient has ever smoked and, if so, how many cigarettes (or cigars or pipes) were smoked a day and for how many years. Find out if the patient has stopped smoking, and if so when that was. Calculate the number of packet-years of smoking (20 cigarettes a day for 1 year = a packet-year).

Cigarette smoking is a risk factor for vascular disease, chronic lung disease, several cancers and peptic ulceration, and may damage the fetus (Table 1.2). Cigar and pipe smokers typically inhale less smoke than cigarette smokers, and overall mortality rates are correspondingly lower in this group, except from carcinoma of the oral cavity, larynx and oesophagus.

Table 1.2 Smoking and clinical associations*

Premature coronary artery disease Peripheral vascular disease Cerebrovascular disease
2 Respiratory disease Lung cancer Chronic obstructive pulmonary disease (chronic airflow limitation) Increased incidence of respiratory infection Increased incidence of postoperative respiratory complications
3 Other cancers Larynx, oral cavity, oesophagus, nasopharynx, bladder, kidney, pancreas, stomach, uterine cervix
4 Gastrointestinal disease Peptic ulceration
5 Pregnancy Increased risk of spontaneous abortion, fetal death, neonatal death, sudden infant death syndrome
6 Drug interactions Induces hepatic microsomal enzyme systems, e.g. increased metabolism of propranolol, theophylline

* Individual risk is influenced by the duration, intensity and type of smoke exposure, as well as by genetic and other environmental factors. Passive smoking is also associated with respiratory disease.

Alcohol

Ask whether the patient drinks alcohol.[14] If so, ask what type, how much and how often. If the patient claims to be a social drinker, find out exactly what this means. In a glass of wine, a nip (or shot) of spirits, a glass of port or sherry, or a 200 mL (7 oz) glass of beer, there are approximately 8–10 g of alcohol (1 unit = 8 g). In the UK, the current recommended safe limits are 21 units (168 g of ethanol) a week for men and 14 units (112 g of ethanol) for women; weekly consumption of more than 50 units for men and 35 units for women defines a high-risk group. Alcohol becomes a major risk factor for liver disease in men if more than 80 g and in women if more than 40 g are taken daily for 5 years or longer. The National Health & Medical Research Council (NHMRC) in Australia recommends a maximum alcohol intake of no more than 40 g per day for males on average (and 20 g per day for females) with two alcohol-free days a week. Alcoholics are notoriously unreliable about describing their alcohol intake, so it may be important to suspend belief and sometimes (with the patient's permission) talk to the relatives.

Certain questions can be helpful in making a diagnosis of alcoholism; these are referred to as the CAGE questions:[15]

1. Have you ever felt you ought to ***C****ut* down on your drinking?

2. Have people ***A****nnoyed* you by criticizing your drinking?

3. Have you ever felt bad or ***G****uilty* about your drinking?

4. Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? (***E****ye opener*)

If the patient answers 'yes' to any of these questions, this suggests there may be a serious alcohol dependence problem. The complications of alcohol abuse are summarised in Table 1.3.

Table 1.3 Alcohol (ethanol) abuse: complications

Gastrointestinal system
• Acute gastric erosions
• Gastrointestinal bleeding from varices, erosions, Mallory-Weiss

tear, peptic ulceration

• Pancreatitis (acute, recurrent or chronic)

• Diarrhoea (watery, due to alcohol itself, or steatorrhoea from chronic alcoholic pancreatitis or, rarely, liver disease)

• Hepatomegaly (fatty liver, chronic liver disease)

• Chronic liver disease (alcoholic hepatitis, cirrhosis) and associated complications

• Cancer (oesophagus, cardia of stomach, liver, pancreas)

Cardiovascular system

• Cardiomyopathy

• Arrhythmias

• Hypertension

Nervous system

• 'Blackouts'

• Nutrition-related conditions, e.g. Wernicke's encephalopathy, Korsakoff's psychosis, peripheral neuropathy (thiamine deficiency), pellagra (dementia, dermatitis and diarrhoea from niacin deficiency)

• Withdrawal syndromes, e.g. tremor, hallucinations, 'rum fits', delirium tremens

• Cerebellar degeneration

• Alcoholic dementia

• Alcoholic myopathy

• Autonomic neuropathy
Haematopoietic system • Anaemia (dietary folate deficiency, iron deficiency from blood loss, direct toxic suppression of the bone marrow, rarely B_{12} deficiency with chronic pancreatitis, or sideroblastic anaemia) • Thrombocytopenia (from bone marrow suppression or hypersplenism)
Genitourinary system • Erectile dysfunction (impotence), testicular atrophy in men • Amenorrhoea, infertility, spontaneous abortion, fetal alcohol syndrome in women
Other effects • Increased risk of fractures and osteonecrosis of the femoral head

Occupation and education

Ask the patient about present occupation;[16] the WHACS mnemonic is useful here:[17]

1. **W**hat do you do?
2. **H**ow do you do it?
3. **A**re you concerned about any of your exposures or experiences?
4. **C**o-workers or others exposed?
5. **S**atisfied with your job?

Finding out exactly what the patient does at work can be helpful (page 113). Note particularly any work exposure to dusts, chemicals or disease; for example, mine and industrial workers may have the disease asbestosis. Find out if any similar complaints have affected fellow workers.

Ask about the education level attained; this can influence the way things are explained. Checking on hobbies can also be informative (e.g. bird fanciers and lung disease).

Overseas travel and immunisation

If an infectious disease is a possibility, ask about recent overseas travel, destinations reached, and how the patient lived when away (e.g. did he or she drink unbottled water and eat local foods, or dine at expensive international hotels). Ask about immunisation status and whether any prophylactic drugs (e.g. for malaria) were taken during the travel period. Find out whether the patient has had recent immunisations (e.g. for hepatitis B, pneumococcal disease, *Haemophilus influenzae* or influenza).

Marital status, social support and living conditions

To determine the patient's marital status, ask who is living at home with the patient. Find out about the health of the spouse and of any children. Check if there are any other household members. Establish who is the patient's main 'caregiver'. Discreet questions about sexual activity may be very relevant. For example, erectile dysfunction may occur in neurological conditions, debilitating illness or psychiatric disease. Questions about living arrangements are particularly important for chronic or disabling illnesses, where it is necessary to know what social support is available and whether the patient is able to manage at home (for example, the number of steps required for access to the house, or the location of the toilet).

Ask if the patient considers him- or herself to be a spiritual person. Spirituality is an important factor, especially in the care of dying patients, in the creation of living wills and in understanding the support network available for the patient.

Ask about the adequacy of the patient's diet, who does the cooking, availability of 'meals on wheels' and other services such as house cleaning. Also ask about the amount of physical activity undertaken. The presence of pets in the home may be important if infections or allergies are suspected.

The family history

Many diseases run in families. For example, ischaemic heart disease that has developed at a young age in parents or siblings is a major risk factor for ischaemic heart disease in the offspring. Various malignancies, such as breast

and large-bowel carcinoma, are more common in certain families. Both genetic and common environmental exposures may explain these familial associations. Some diseases (e.g. haemophilia) are directly inherited.[18]

Ask about any history of a similar illness in the family. Inquire about the health and, if relevant, the causes of death and ages of death of the parents and siblings. If there is any suggestion of a hereditary disease, a complete family tree should be compiled showing all members affected (Figure 1.1). Patients can be reluctant to mention that they have relatives with mental illnesses, epilepsy or cancer, so ask tactfully about these diseases. Consanguinity (usually first cousins marrying) increases the probability of autosomal recessive abnormalities in the children; ask about this if the pedigree is suggestive.

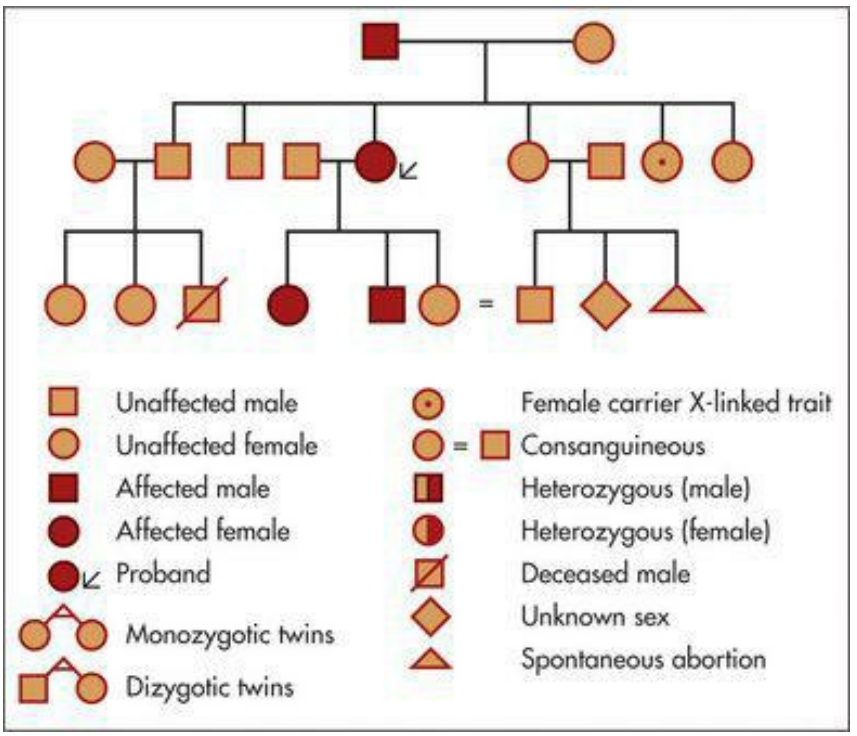

Figure 1.1 Preparing a family tree: note the symbols used for the documentation

Systems review

As well as detailed questioning about the system likely to be diseased, it is essential to ask about important symptoms and disorders in other systems (*Questions box 1.1*), otherwise important diseases may be missed.[19,20] An experienced clinician will perform a targeted systems review, based on information already obtained from the patient; clearly it is not realistic to put all of the listed questions to a patient.

all of the listed questions to a patient.

When recording the systems review, list important negative answers ('relevant negatives'). Remember: if other recent symptoms are unmasked, more details must be sought; relevant information is then added to the history of the presenting illness. Before completing the history, it is often valuable to ask what the patient thinks is wrong, and what he or she is most concerned about. General and sympathetic questions about the effect of a chronic or severe illness on the patient's life are important for establishing rapport and for finding out what else might be needed (both medical and non-medical) to help the patient.

Major presenting symptoms for each system are described in the following chapters. Examples of supplementary important questions to ask about past history, social history and family history are also given there for each system.

Skills in history taking

In summary, several skills are important in obtaining a useful and accurate history.[21] First, establish rapport and understanding. Second, ask questions in a logical sequence. Start with open-ended questions. Listen to the answers and adjust your interview accordingly. Third, observe and provide non-verbal clues carefully. Encouraging, sympathetic gestures and concentration on the patient that makes it clear he or she has your undivided attention are most important and helpful, but are really a form of normal politeness. Fourth, proper interpretation of the history is crucial.

Your aim should be to obtain information that will help establish the likely anatomical and physiological disturbances present, the aetiology of the presenting symptoms and the impact of the symptoms on the patient's ability to function. (In Chapter 2, some advice on how to take the history in more challenging circumstances is considered.) This type of information will help you plan the diagnostic investigations and treatment, and to discuss the findings with, or present them to, a colleague if necessary (see page 462). First, however, a comprehensive and systematic physical examination is required.

These skills can be obtained and maintained only by practice.

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Chapter 2

Advanced history taking

> 'First the doctor told me the good news: I was going to have a disease named after me.'
> *Steve Martin*

Most complaints about doctors relate to the failure of adequate communication.[1,2] Encouraging patients to discuss their major concerns without interruption enhances satisfaction and yet takes little time (on average 90 seconds).[3,4] Giving premature advice or reassurance, or inappropriate use of closed questions, badly affects the interview.

Taking a good history

Communication and history taking skills can be learnt but require constant practice. Factors that improve communication include use of appropriate open-ended questions, giving frequent summaries, and the use of clarification and negotiation.[3,4] See Table 2.1.

Table 2.1 Taking a better history

1 Ask open questions to start with (and resist the urge to interrupt), but finish with specific questions to narrow the differential diagnosis.
2 Do not hurry (or at least do not appear to be in a hurry, even if you have only limited time).
3 Ask the patient 'What else?' after he or she has finished speaking, to ensure that all problems have been identified. Repeat the 'What else?' question as often as required.
4 Maintain comfortable eye contact and an open posture.
5 Use the head nod appropriately, and use silences to encourage the patient to express him- or herself.
6 When there are breaks in the narrative, provide a summary for the patient by briefly re-stating the facts or feelings identified, to maximise accuracy and demonstrate active listening.
7 Clarify the list of chief or presenting complaints with the patient, rather than assuming that you know them.
8 If you are confused about the chronology of events or other

issues, admit it and ask the patient to clarify.
9 Make sure the patient's story is internally consistent and, if not, ask more questions to verify the facts.
10 If emotions are uncovered, name the patient's emotion and indicate that you understand (e.g. 'You seem sad'). Show respect and express your support (e.g. 'It's understandable that you would feel upset').
11 Ask about any other concerns the patient may have, and address specific fears.
12 Express your support and willingness to cooperate with the patient to help solve the problems together.

The differential diagnosis

As the interview proceeds, the clinician will need to begin to consider the possible diagnosis or diagnoses – the **differential diagnosis**. This usually starts as a long and ill-defined mental list in the mind of the doctor. As more detail of the symptoms emerges, the list becomes more defined. This mental list must be used as a guide to further questioning in the later part of the interview. Specific questions should then be used to help confirm or eliminate various possibilities. The physical examination and investigations may then be directed to help further narrow the differential. At the end of the history and examination, a likely diagnosis and list of differential diagnoses should be drawn up. This will often be modified as results of tests emerge.

This method of history taking is called, rather grandly, the *hyopthetico-deductive approach*. It is in fact used by most experienced clinicians. History taking does not mean asking a series of set questions of every patient, but rather knowing what questions to ask as the differential diagnosis begins to become clearer.

Fundamental considerations when taking the history

As any medical interview proceeds, the clinician should keep in mind four underlying principles:

1. What is the probable diagnosis so far?
   This is a basic differential diagnosis. As you complete the history of the

presenting illness, ask yourself: 'For *this* patient based on *these* symptoms and what I know so far, what are the most likely diagnoses?' Then direct additional questions accordingly.

2. Could any of these symptoms represent an urgent or dangerous diagnosis – **red-flag** (alarm) symptoms?

Such diagnoses may have to be considered and acted upon even though they are not the most likely diagnosis for this patient. For example, the sudden occurrence of breathlessness in an asthmatic who has had surgery this week is more likely to be due to a worsening of asthma than to a pulmonary embolism, but an embolism must be considered because of its urgent seriousness. Ask yourself: 'What diagnoses must not be missed?'

3. Could these symptoms be due to one of the mimicking diseases which can present with a great variety of symptoms in different parts of the body?

Tuberculosis used to be the great example of this, but HIV infection, syphilis and sarcoidosis are also important disease 'mimickers'. Anxiety and depression commonly present with many somatic symptoms.

4. Is the patient trying to tell me about something more than these symptoms alone?

Apparently trivial symptoms may be worrying to the patient because of an underlying anxiety about something else. Asking 'What is it that has made you concerned about these problems now?' or 'Is there anything else you want to talk about?' may help to clarify this aspect. Ask the patient 'What else?' as natural breaks occur in the conversation.

Personal history taking

Certain aspects of history taking go beyond routine questioning about symptoms. This part of the art needs to be learnt by taking lots of histories; practice is absolutely essential. With time you will gain confidence in dealing with patients whose medical, psychiatric or cultural situation makes standard questioning difficult or impossible.[5,6]

Most illnesses are upsetting, and can induce feelings of anxiety or depression. On the other hand, patients with primary psychiatric illnesses often present with physical rather than psychological symptoms. This brain–body interaction is bidirectional, and this must be understood as you obtain the story.

Discussion of **sensitive issues** may actually be therapeutic in some cases. '*Sympathetic confrontation*' can be helpful in some situations. For example, if the patient appears sad, angry or frightened, referring to this in a

example, if the patient appears sad, angry or frightened, referring to this in a tactful way may lead to the volunteering of appropriate information.

If an emotional response is obtained, use **emotion-handling skills** (**NURS**) to deal with this during the interview (see Table 2.2). ***N****ame* the emotion, show ***U****nderstanding*, deal with the issue with great ***R****espect*, and show ***S****upport* (e.g. 'It makes sense you were angry after you husband left you. This must have been very difficult to deal with. Can I be of any help to you now?').

Table 2.2 Emotion-handling skills—NURS

• **N**ame the emotion
• Show **U**nderstanding
• Deal with the issue with **R**espect
• Show Support

There may be reluctance or initial inability on the part of the patient to discuss sensitive problems with a stranger. Here, gaining the patient's confidence is critical. Although this type of history taking can be difficult, it can also be the most satisfying of all interviews, since interviewing can be directly therapeutic for the patient.

Any medical illness may affect the psychological status of a patient. Moreover, pre-existing psychological factors may influence the way a medical problem presents. Psychiatric disease can also present with medical symptoms. Therefore, an essential part of the history-taking process is to obtain information about psychological distress and the mental state. A *sympathetic*, unhurried approach using **open-ended questions** will provide much information that can then be systematically recorded after the interview.

It is important for the history taker to maintain an objective demeanour, particularly when asking about delicate subjects such as sexual problems, grief reactions or abuse. It is not the clinician's role to appear judgmental about patients or their lives.

The formal psychological or psychiatric interview differs from general medical history taking. It takes considerable time for patients to develop rapport with, and confidence in, the interviewer. There are certain standard questions that may give valuable insights into the patient's state of mind (see

Questions boxes 2.1–2.3). It may be important to obtain much more detailed information about each of these problems, depending on the clinical circumstances (see Chapter 12).

Questions box 2.1

Personal questions to consider asking a patient

1. Where do you live (e.g. a house, flat or hostel)?
2. What work do you do now, and what have you done in the past?
3. Do you get on well with people at home?
4. Do you get on well with people at work?
5. Do you have any money problems?
6. Are you married or have you been married?
7. Could you tell me about your close relationships?
8. Would you describe your marriage (or living arrangements) as happy?
9. Have you been hit, kicked or physically hurt by someone (physical abuse)?
10. Have you been forced to have sex (sexual abuse)?
11. Would you say you have a large number of friends?
12. Are you religious?
13. Do you feel you are too fat or too thin?
14. Has anyone in the family had problems with psychiatric illness?
15. Have you ever had a nervous breakdown?
16. Have you ever had any psychiatric problem?

Questions box 2.2

Questions to ask the patient who may have depression

1. Have you been feeling sad, down or blue?
2. Have you felt depressed or lost interest in things daily for 2 or more weeks in the past?
3. Have you ever felt like taking your own life?—Risk of self-harm
4. Do you find you wake very early in the morning?
5. Has your appetite been poor recently?
6. Have you lost weight recently?
7. How do you feel about the future?
8. Have you had trouble concentrating on things?
9. Have you had guilty thoughts?
10. Have you lost interest in things you usually enjoy?

Questions box 2.3

Questions to ask the patient who may have anxiety

1. Do you worry excessively about things?
2. Do you have trouble relaxing?
3. Do you have problems getting to sleep at night?
4. Do you feel uncomfortable in crowded places?
5. Do you worry excessively about minor things?
6. Do you feel suddenly frightened, or anxious or panicky, for no reason in situations in which most people would not be afraid?
7. Do you find you have to do things repetitively, such as washing your hands multiple times?

8. Do you have any rituals (such as checking things) that you feel you have to do, even though you know it may be silly?

9. Do you have recurrent thoughts that you have trouble controlling?

The sexual history

The sexual history is important, but these questions are not appropriate for all patients, at least not at the first visit when the patient has not yet had time to develop confidence and trust. The patient's permission should be sought before questions of this sort are asked. This request should include some explanation as to why the questions are necessary.[7]

A sexual history is most relevant if there is presentation with a urethral discharge, painful urination (dysuria), vaginal discharge, a genital ulcer or rash, abdominal pain, pain on intercourse (dyspareunia), or anorectal symptoms, or if human immunodeficiency virus (HIV) or hepatitis are suspected.[8]

Ask about the last date of intercourse, number of contacts, homosexual or bisexual partners, and contacts with sex workers. The type of sexual practice may also be important: for example, oroanal contact may predispose to colonic infection, and rectal contact to hepatitis B or C, or HIV.

It is also often relevant to ask diplomatic and 'matter of fact' questions about a history of sexual abuse. One way to start is: 'You may have heard that some people have been sexually or physically victimised, and this can affect their illness. Has this ever happened to you?' Such events may have important and long-lasting physical and psychological effects.[9]

Accurate answers to some of these questions may not be obtained until the patient has had a number of consultations and has developed trust in the treating doctor. If an answer seems unconvincing, it may be reasonable to ask the question again at a later stage.

Cross-cultural history taking

If the patient's first language is not the same as yours, he or she may find the medical interview very difficult. Maintain eye contact (unless this is considered rude in the cultural context) and be attentive as you ask questions.[10]

If language is an issue, an **interpreter** who is *not* a relative should be used to assist these patients. Some patients may be embarrassed to discuss

used to assist these patients. Some patients may be embarrassed to discuss medical problems in front of a relative, and relatives are often tempted to explain (or change) the patient's answers instead of just translating them. Professional translators are trained to avoid this and can often provide simultaneous and accurate translation, but not all patients feel comfortable with a third person present. It is important to continue to make eye contact with the patient while asking questions, even though it will be the interpreter who responds; otherwise the patient may feel left out of the discussion. Questions should be directed as if going straight to the patient: 'Have you had any problems with shortness of breath?' rather than 'Has he had any breathlessness?' It always takes longer to interview a patient using an interpreter, and more time should be allowed for the consultation.

It is alarmingly common for relatives who accompany patients to interrupt and contradict the patient's version of events even when they are not acting as translators. The interposition of a relative between the clinician and the patient always makes the history taking less direct and the patient's symptoms more subject to 'filtering' or interpretation before the information reaches the clinician. Try tactfully to direct relatives to let the patient answer in his or her own words.

Attitudes to illness and disease vary in different cultures. Problems considered shameful by the patient may be very difficult for him or her to discuss. In some cultures (and increasingly in Australia), women may object to being questioned or examined by male doctors or students. Male students may need to be accompanied by a female chaperone for even the interview with sensitive female patients, and certainly should have one during the physical examination of the patient. It is most important that cultural sensitivities on either side are not allowed to prevent a thorough medical assessment.

Aboriginal patients may have a large extended family. These relatives may be able to provide invaluable support to the patient, but their own medical or social problems may interfere with the patient's ability to manage his or her own health. Commitments to family members may make it difficult for the patient to come to medical appointments or to travel for specialist treatment. Detailed questioning about family contacts and responsibilities may help with the planning of the patient's treatment.

Recent concepts in indigenous health care include the notions of *cultural awareness*, *cultural sensitivity* and *cultural safety*.[11,12] Cultural awareness can be thought of as the first step towards understanding the rituals, beliefs, customs and practices of a culture. Cultural sensitivity means accepting the importance and roles of these differences. Cultural safety means using this knowledge to protect patients and communities from danger, and making sure that there is a genuine partnership between the health workers and their indigenous patients. These skills have general application for all cultural