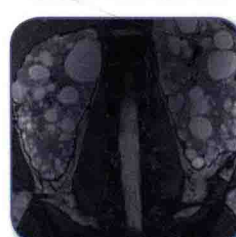


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Davidson's

22nd Edition

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Principles and Practice of Medicine

CHURCHILL
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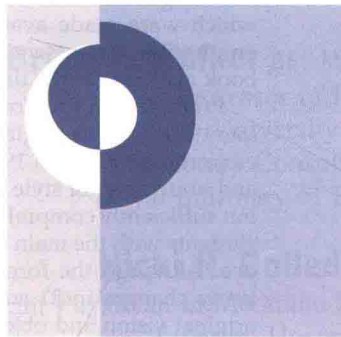
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Davidson's

Principles and Practice of

Medicine

22nd Edition



Sir Stanley Davidson (1894–1981)

This famous textbook was the brainchild of one of the great Professors of Medicine of the 20th century. Stanley Davidson was born in Sri Lanka and began his medical undergraduate training at Trinity College, Cambridge; this was interrupted by World War I and later resumed in Edinburgh. He was seriously wounded in battle, and the carnage and shocking waste of young life that he encountered at that time had a profound effect on his subsequent attitudes and values.

In 1930 Stanley Davidson was appointed Professor of Medicine at the University of Aberdeen, one of the first full-time Chairs of Medicine anywhere and the first in Scotland. In 1938 he took up the Chair of Medicine at Edinburgh and was to remain in this post until retirement in 1959. He was a renowned educator and a particularly gifted teacher at the bedside, where he taught that everything had to be questioned and explained. He himself gave most of the systematic lectures in Medicine, which were made available as typewritten notes that emphasised the essentials and far surpassed any textbook available at the time.

Principles and Practice of Medicine was conceived in the late 1940s with its origins in those lecture notes. The first edition, published in 1952, was a masterpiece of clarity and uniformity of style. It was of modest size and price, but sufficiently comprehensive and up to date to provide students with the main elements of sound medical practice. Although the format and presentation have seen many changes in 21 subsequent editions, Sir Stanley's original vision and objectives remain. More than half a century after its first publication, his book continues to inform and educate students, doctors and health professionals all over the world.

Readers may be interested to listen to an interview with Sir Stanley Davidson, which can be found on the Royal College of Physicians of Edinburgh website at: www.rcpe.ac.uk/library-archives/sir-stanley-davidson-1894-1981.

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Preface

Since *Davidson's Principles and Practice of Medicine* was first published in 1952, over two million copies have been sold and the book has acquired a large following of medical students, doctors and other health professionals all over the world. It has been translated into many languages, most recently Japanese, Russian, Italian and Polish, and has won numerous prizes, the last edition being highly commended in the British Medical Association Book Awards. *Davidson's* has endured because with each new edition it has evolved to provide comprehensive updated information in a concise and easy-to-read format.

From its beginnings, *Davidson's* has sought to explain the basis for medical practice. The integration of 'pre-clinical' science with clinical practice is now a feature of many undergraduate medical curricula, and many students use *Davidson's* from the outset of their medical course. In recognition of this, the first part of the book, 'Principles of Medicine', highlights the mechanisms of health and disease, along with the professional and ethical principles underlying medical practice. Many examples of clinical problems are included to bring the medical sciences to life for the new student and to rejuvenate the interest of the experienced clinician. The second part of the book, 'Practice of Medicine', covers the major medical specialties. Every chapter has been thoroughly revised for this edition to ensure that it reflects the 'cutting edge' of medical knowledge and practice and is pitched at a level of detail to meet the needs of candidates preparing for examination for Membership of the Royal College of Physicians or its equivalents. In recognition of the emerging specialty of Stroke Medicine, this topic is now covered in a separate chapter from Neurological Disease. Surgical approaches to disease management are mentioned in *Davidson's*, but readers are encouraged to consult the sister book, *Principles and Practice of Surgery*, for more details.

Many of the innovations introduced in recent editions have been warmly received. We have retained both a patient-orientated approach, in the ever-popular 'Clinical Examination' overviews and 'Presenting Problems' sections, alongside practical content, in 'Emergency' and 'Practice Point' boxes. Embedding horizontal themes within the book – for example, with the 'In Old Age' and 'In Pregnancy' boxes – has been applauded, and we have extended this approach by adding 'In Adolescence' boxes in relevant chapters; these emphasise key points in managing the transition of patients between paediatric and adult services.

We are proud of *Davidson's* international heritage. As well as recruiting authors from around the globe, particularly for topics such as Infectious Diseases and HIV, we have welcomed new members on to our International Advisory Board. These leading experts from 16 countries provide detailed comments that, along with the feedback received from our global readership, are crucial to our planning of every chapter in each new edition. We have also visited several medical schools on the Indian subcontinent and received invaluable feedback from students and teachers. We have addressed as many of these suggestions as possible in this edition.

Education is achieved by assimilating information from many sources and readers of this book can enhance their learning experience by using complementary resources. The StudentConsult platform continues to provide online access to the text and illustrations of the main edition. The book is also available in various eBook formats. *Davidson's* has had a long-standing association with its sister books, *Macleod's Clinical Examination* (now in its 13th Edition) and *Principles and Practice of Surgery* (now in its 6th Edition). The *Davidson's* 'family' has expanded with the publication of *Davidson's Essentials of Medicine*, a long-requested pocket-size version of the main text; *Davidson's Foundations of Clinical Practice*, a guide to starting work as a junior doctor; *Davidson's 100 Clinical Cases*, which contains cases directly based on the 'Presenting Problems' in the main text; and *Macleod's Clinical Diagnosis*, which describes a systematic approach to differential diagnosis of symptoms and signs. We congratulate the editors and authors of these books for continuing the tradition of concise, easily read and beautifully illustrated texts.

The regular introduction of new authors and editors to *Davidson's* is important to maintain the freshness of each new edition. On this occasion, Dr Ian Penman has joined the editorial team and 18 new authors have contributed material. We all take immense pride in producing an outstanding book for the next generation of doctors, and in continuing the great tradition first established by Sir Stanley Davidson and passed on by all the previous editors and authors, for what remains one of the world's leading textbooks of medicine.

BRW, NRC, SHR, IDP
Edinburgh

List of presenting problems

These presentations represent the most common reasons for referral to each medical specialty and are described in the 'Presenting Problems' sections of all system-based chapters. The same approach has

also been employed in several of the chapters in the 'Principles of Medicine' section, reinforcing the close connection between clinical problems and fundamental mechanisms of disease.

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Introduction

The first section of the book, 'Principles of Medicine', describes the basis on which medicine is practised and the fundamental mechanisms determining health and disease which are relevant to all medical specialties. The second section, 'Practice of Medicine', is devoted to individual medical specialties. Each chapter has been written by experts in the field to provide the level of detail expected of trainees in their discipline. To maintain the book's virtue of being concise, care has been taken to avoid unnecessary duplication between chapters.

The system-based chapters follow a standard format, beginning with an overview of relevant clinical examination, followed by an account of functional anatomy, physiology and investigations, then the common presentations of disease, and details of the individual diseases and treatments of that system. Where appropriate, the chapters in the first section follow a similar format; in chapters which describe the immunological, cellular and molecular basis of disease, this problem-based approach brings the close links between modern medical science and clinical practice into sharp focus.

The methods used to present information are described below.

Clinical examination overviews

The value of good clinical skills is highlighted by a two-page overview of the important elements of the clinical examination at the beginning of most chapters. The left-hand page includes a mannikin to illustrate key steps in examination of the relevant system, beginning with simple observations and progressing in a logical sequence around the body. The right-hand page expands on selected themes and includes tips on examination technique and interpretation of physical signs. These overviews are intended to act as an aide-mémoire and not as a replacement for a detailed text on clinical examination, as provided in the sister title, *Macleod's Clinical Examination*.

Presenting problems

Medical students and junior doctors must not only learn a great many facts about various disorders, but also develop an analytical approach to formulating a differential diagnosis and a plan of investigation for patients who present with particular symptoms or signs. In *Davidson's* this is addressed by incorporating a 'Presenting Problems' section into all system-based chapters. Nearly 300 presentations are included, which represent

the most common reasons for referral to each medical specialty. The same approach has been used in several of the chapters in the 'Principles of Medicine' section, to reinforce the close connection between clinical problems and fundamental mechanisms of disease. Many patients present with symptoms such as weight loss, dizziness or breathlessness, which are not specific to a particular system; these are described in the most relevant chapter and cross-referenced elsewhere. A list of presenting problems may be found on pages vii–viii.

Boxes

Boxes are a popular way of presenting information and are particularly useful for revision. They are classified by the type of information they contain, using specific symbols.



General Information

These include causes, clinical features, investigations, treatments and other useful information.



Evidence-based Medicine

Clinicians base their practice on the best available evidence, which needs to be up to date, relevant, authoritative and easily accessible. Over 120 evidence-based medicine (EBM) boxes are included in this edition. They contain recommendations that are supported by evidence obtained from meta-analysis of several randomised controlled trials (RCTs) or one (or more) high-quality RCT, and therefore conform to 'Grade A' criteria, as described in Chapter 1 (p. 8).



Practice Point

There are many practical skills that students and doctors must learn. These vary from inserting a nasogastric tube to reading an ECG or X-ray, or interpreting investigations such as arterial blood gases or thyroid function tests. 'Practice Point' boxes provide straightforward guidance on how these and many other skills can be acquired and applied.



Emergency

These boxes describe management of many of the most common emergencies in medicine.



In Old Age

In most developed countries, older people comprise 20% of the population and are the chief users of health care. While they contract the same diseases as those who are younger, there are often important differences in the way they present and how they are best managed.

Chapter 7, 'Ageing and Disease', concentrates on the principles of managing the frailest group who suffer from multiple comorbidity and disability, and who tend to present with non-specific problems such as falls or delirium. However, many older people also suffer from specific single-organ pathology. 'In Old Age' boxes are thus included in each chapter and describe common presentations, implications of physiological changes of ageing, effects of age on investigations, problems of treatment in old age, and the benefits and risks of intervention in older people.



In Pregnancy

Many conditions are different in the context of pregnancy, while some arise only during or shortly after pregnancy. Particular care must be taken with investigations (for example, to avoid radiation exposure to the fetus) and treatment (to avoid the use of drugs which harm the fetus). These issues are highlighted by 'In Pregnancy' boxes distributed throughout the book.



In Adolescence

Although Paediatric Medicine is not covered in *Davidson's*, many chronic disorders begin in childhood and adult physicians often contribute to multidisciplinary teams that manage young patients 'in transition' between paediatric and adult health-care services. This group of patients often presents a particular challenge, due to the physiological and psychological changes that occur in adolescence and which can have a major impact on the disease and its management. Adolescents can be encouraged to take over responsibility from their

parents/carers in managing their disease, but are naturally rebellious and often struggle to adhere to the impositions of chronic treatment. To highlight these issues, we have introduced this new box format in the 22nd Edition.

Terminology

Recommended International Non-proprietary Names (rINNs) are used for all drugs, with the exception of adrenaline and noradrenaline. However, British spellings have been retained for drug classes and groups (e.g. amphetamines not amfetamines).

Units of measurement

The International System of Units (SI units) is the recommended means of presentation for laboratory data and has been used throughout *Davidson's*. However, we recognise that many laboratories around the world continue to provide data in non-SI units, so these have been included in the text for the commonly measured analytes. Both SI and non-SI units are also given in Chapter 29, which describes the reference ranges used in Edinburgh's laboratories. It should be appreciated that these reference ranges may vary from those used in other laboratories.

Finding what you are looking for

A contents list is given on the opening page of each chapter. In addition, the book contains numerous cross-references to help readers find their way around, along with an extensive index of over 15 000 subject entries. The online text available on StudentConsult (www.studentconsult.com) allows for detailed searches of the content by keyword. A list of up-to-date reviews and useful websites with links to management guidelines appears at the end of each chapter.

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