fixation. Wide-spread acceptance of its philosophy has been supported by a well-developed educational programme including instructional meetings and technical manuals. The original AO manuals of internal fixation expounding the principles of anatomical reduction and rigid internal fixation were compulsory reading for orthopaedic trauma surgeons.

This book builds on the first edition published in 2000. Like its award-winning predecessor, this second edition aims to provide trainee and senior surgeons with up-to-date knowledge for correctly applying AO philosophy and principles as they apply to the management of fractures. I feel these aims have been largely met. Rapid advances in trauma knowledge during the 7 years since the first edition are recognised by the inclusion of new chapters on minimally invasive surgery, soft-tissue handling, osteoporosis and an introduction to biotechnology. All other chapters have been updated with particular reference to the increasing popularity of bridge plating/locking plates.

The book consists of two volumes. Volume 1, 'Principles', contains sections covering basic sciences, fracture classification, decision-making, surgical principles, general topics and complications. Volume 2, 'Specific fractures', contains 21 chapters covering most fractures including long bones, pelvis and acetabulum, and spine. This results in some inevitable repetition with general principles covered in volume 1 being repeated in the individual chapters in volume 2. This does, however, enable each chapter to stand alone for one-off reading.

For a multi-author production, the style is generally consistent between chapters. Each chapter provides an overview of relevant anatomy, surgical approaches, basic science, fracture classification (largely confined to the AO system), decision-making, surgical techniques and pitfalls. The writing style is clear and concise, making for easy reading. The illustrations and diagrams supported by short videos in the accompanying DVD are of excellent quality.

Most chapters provide a clear, concise overview of their subject. Particularly strong chapters are those on fracture classification, intra-articular fractures, intramedullary nails, polytrauma (including a good description of the concept of damage control surgery), proximal humeral, pelvic and acetabular fractures. Some chapters, for example external fixator, distal radius and wrist, suffer due to restricting fixation devices described to those produced by AO. The proximal femur chapter is also too brief and lacking in operative tips for such a common subject. The spine chapter has less detail than the others, though this is probably understandable for such a large topic.

Overall, there is a good number of relevant references for each subject. The arguments made in favour of the AO philosophy are generally sound. At times, it seems there is poor evidence offered to support the principles recommended,

though this reflects the relative lack of randomised controlled trials in trauma surgery rather than being a criticism of this book.

This book is released into a market where there is fierce competition ranging from established major reference works through other AO publications to a variety of regional or single fracture texts. Against this background, it has to be asked at whom this book is aimed. I feel it can be recommended as worthy of consideration for higher surgical trainees requiring a basic grounding in the principles of operative fracture care. Nevertheless, in an era of increasing subspecialisation in trauma care, it does not provide sufficient detail for subspecialty expertise but I feel it can be recommended for consultants providing a general trauma service outside their field of subspecialty interest.

Orthopaedic Knowledge Update: Pediatrics 3

MARK F ABEL

EXTENT P/H	400 pages, Paperback
PRICE/ISBN	£83.95, 100892033533
PUBLISHER	American Academy of Orthopedic Surgeons (Rosemont, IL), 2006
REVIEWER	Robin Paton
STAR RATING	*****

The editor states that the goal of this book is to provide a review for general orthopaedic surgeons and residents in training that will update evidence-based treatments and guidelines in paediatric orthopaedics. It is also hoped that it will be used as a reference source. The aim is to summarise current and past information, providing a text book containing the essential knowledge necessary for practising paediatric orthopaedics, both elective and emergency. I feel that this aim has been generally achieved as most common aspects of children's orthopaedics are covered. However, the book in itself cannot cover the whole of paediatric orthopaedics and other reference sources would be required.

It is broken into five sections, each with a different section editor. These are: general paediatric orthopaedics, neuromuscular disorders and metabolic disorders, lower extremity conditions, paediatric trauma and the spine. The sections are written by experienced American authors who are experts in their fields. Although it is written very much for those with an interest in paediatric orthopaedics, this book will also be useful for those general orthopaedic surgeons who have to care for children when on emergency 'take'. There are particularly good sections on bone and joint infection and paediatric trauma.

Each chapter is written clearly. An evidence-based view is taken and the sensitivities, specificities, negative and positive factors are widely quoted, particularly in the infection section. Each chapter has a current and classical bibliography with a small summary on each of the most important papers relevant to the subject. This would be particularly useful for SpR trainees planning to take the FRCS trauma and orthopaedic examination and is clearly set at a level for residents undertaking the American in-service examination.

The information quoted appears to be up-to-date and accurate and the format is easy to read. It is very much in a factual style crammed with information but with good illustrations – photographs, line drawings and algorithms. There are many clinical photographs featuring deformities, which are of good quality. These break up the text effectively, making the book easier to read.

Most chapters are broken into aetiology, clinical presentation, differential diagnosis, investigations and treatment both surgical and non-surgical. The book is obviously written from an American perspective though the views are evidence-based, quoting the world's, rather than just the American, literature. The opinions appear balanced and non-controversial.

In summary, this is an excellent paediatric update book, which quotes the current literature as well as covering the classical literature in each of the subsections. Every hospital library dealing with children's orthopaedic conditions should have a copy of this text book. It is useful to both the non-specialist orthopaedic surgeon who wishes an update of the common conditions that may be encountered when 'on-take' and the paediatric orthopaedic surgeon who is more involved in the care of a child with rarer paediatric orthopaedic conditions. This is very much an up-to-date complement to standard paediatric orthopaedic text books.

Internal Fixators: Concepts and Cases using LCP and LISS

MICHAEL WAGNER, ROBERT FRIGG

EXTENT P/H	868 pages, Hardback
PRICE/ISBN	€349.95, 9783131435514
PUBLISHER	Thieme (Stuttgart), 2006
REVIEWER	Henry Dushan Atkinson
STAR RATING	*****

This is the latest offering from the superb AO Publishing series, which has been educating and guiding orthopaedic surgeons and traumatologists for four decades. It builds on the original AO internal fixation philosophies and details the evolution of fixation methods and techniques, which have continued to develop

in response to scientific investigations and clinical observations.

The manual consists of 868 pages, 800 clear illustrations, 2280 pictures and X-rays, with an accompanying DVD-ROM (which is compatible with both PC and Mac). It is well referenced and has a comprehensive list of contributors, each of whom is internationally recognised in his or her own right. It is also apt that the two editors, Wagner and Frigg, are in fact the designers and developers of the 'combination hole', the screw hole that accommodates both standard dynamic compression cortical screws and locking head screws and which has led to the versatility of the locking compression plate (LCP) systems, providing new hope in the treatment of articular and osteoporotic fractures.

The 'Concepts' section, divided into four subsections, deals with the background of internal fixation, surgical reduction techniques, the techniques of the less invasive stabilisation system (LISS) and LCP together with pitfalls and complications of surgery. The chapters on methodological principles and surgical reduction techniques are particularly useful for the novice surgeon. I feel that the LISS and LCP techniques and procedures sections should be mandatory reading before embarking on the use of these fixation systems.

The 'Cases' section is divided into body regions and gives 117 step-by-step orthopaedic case descriptions, including in most cases the surgical indications, approaches, reduction and fixation as well as rehabilitation regimes. There is also a pitfalls and pearls table for each clinical case. The technical descriptions are good, with very useful concise preoperative planning guides together with information on patient positioning, C-arm placement and equipment requirements. This makes an ideal operating theatre and examination reference guide.

The DVD-ROM is also an excellent resource, with a lot of the screen texts benefiting from animations. In addition, there is a multitude of good technical videos to complement the text in the manual although these are performed on plastic bones. I would have far preferred that those same 117 cases be recorded on the DVD. An interesting additional feature on the DVD is the ability to have one's own 'personal favourites' basket, where videos and text can be stored for repeated easy and quick access. My criticism of the DVD lies with non-user-friendly menus, which are slow to scroll and, irritatingly, one has to return to each title heading when attempting to change sections. Also, on first use, the DVD would not automatically load up with Windows Vista and the QuickTime application had to be downloaded separately from the internet.

These small factors aside this publication certainly does not disappoint. I believe that it is essential reading for both the new orthopaedic trainee, trainees preparing for supervised surgery and those surgeons already involved in trauma surgery needing to refresh their practice. Despite the high price tag I would not hesitate to purchase a copy.