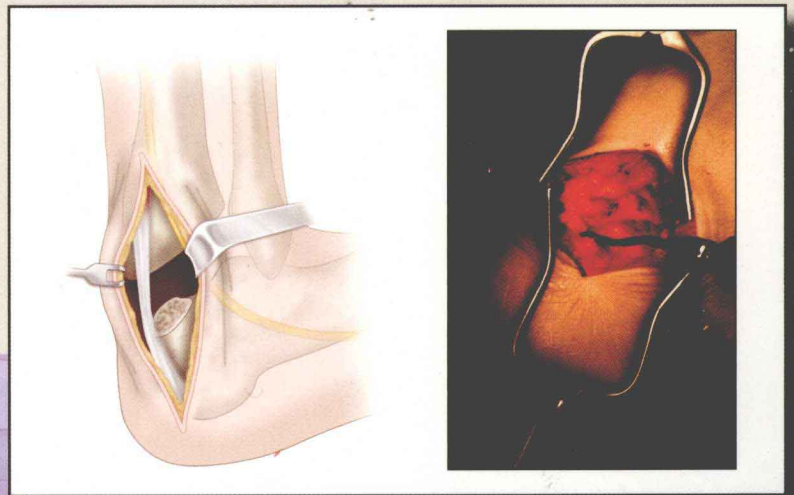




foot and ankle *surgery*

companion website >> with video

Glenn B. Pfeffer
Mark E. Easley
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OPERATIVE TECHNIQUES

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OPERATIVE TECHNIQUES

foot and ankle *surgery*

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To my wonderful sons, Daniel and William.

Glenn B. Pfeffer

To my wife, Mary,
and my three children, Ford, Benson, and Charlotte
for allowing me to share the free time I would have spent with them
to make my contribution to this text possible.

Mark E. Easley

Dick Frey was an athlete, scholar, scientist, war hero, and father.
I dedicate this book to my father, a great man.

Carol Frey

To my children Sabrina, and Mathias,
And my Mom and Dad
For their support, love, and care that have made this all possible.

Beat Hintermann

For Alec, Charlotte and James who put up with my long periods of
time in the batcave.
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For S.T.H. from whom all knowledge flows.
And mostly for Betsy. I love you.
Thank you all.
With love and respect,

Andrew K. Sands

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PREFACE

There is nothing more valuable to an orthopaedic surgeon than a detailed and well illustrated chapter on surgical technique. *Operative Techniques: Foot and Ankle Surgery* presents a wide spectrum of such techniques, each laid out in an easy to follow and visually elegant format. I have been privileged to work with eminent colleagues from around the world who have brought an unparalleled diversity of surgical experience to this project. Their contributions span the breadth of foot

and ankle surgery, from the simplest excision to the most complex reconstruction. This text will be an invaluable addition to the libraries of both general orthopaedists and foot and ankle specialists.

On behalf of all of the authors we want to thank Berta Steiner, Bruce Robison, and Kim Murphy from Elsevier for their tireless guidance and support.

Glenn B. Pfeffer, MD

FOREWORD

Over the last ten years, there has been an explosion of knowledge related to the treatment of disorders that affect the foot and ankle. This is in large part due to the interest of dedicated foot and ankle surgeons. I have had the honor of knowing all of the authors of this textbook. Dr. Pfeffer has authored numerous textbooks on foot and ankle surgery. Dr. Mark Easley has been my partner for over 10 years and is an outstanding foot and ankle educator. Carol Frey has been an authority for over 20 years and Professor Hintermann has dedicated his life to the study of ankle and hindfoot arthritis. Andy Sands is a recent addition to a young cadre of outstanding foot and ankle surgeons.

As disorders of the foot and ankle become increasingly better investigated and better understood, this would seem to be an ideal time for a textbook that would be particularly useful to the practicing foot and ankle surgeon. This text authored by Pfeffer, Easley, Frey, Hintermann and Sands is not intended as a reference tome or a complete authoritative review relating to every disorder that affects the foot and ankle. Rather, this text fits the unique need that most practicing foot and ankle surgeons and those in their training have on a very frequent basis. I refer to this type of text as "just in time knowledge". It detailed technical information about a specific surgical procedure that one may be contemplating performing the next day or the next week. This will be particularly useful for someone who wants a review of the

surgical techniques either during surgery or the day before. The text gives us a clear idea of the indications for a specific procedure, it identifies pitfalls of the surgical procedure, and best of all, this book is incredibly well illustrated. The photographs of the surgical procedures will lead the clinician through a complex procedure in a very orderly manner and I believe will greatly enhance our technical skills.

Although the field of foot and ankle surgery is incredibly large, these authors have chosen to provide us with a compendium of some of the more common surgical procedures with a well thought out, but abbreviated approach such that the material might be reviewed in a very short period of time. Yet there does not seem to be any material of critical value that has been left out. The techniques range from the simple excision of a neuroma to the complex reconstruction of an ankle malunion.

I am honored to have been given the opportunity to provide the foreword to the text. The authors are recognized authorities who have contributed significantly in the areas of their expertise. I believe that this text will provide much needed useful information on a just in time basis to the busy clinician.

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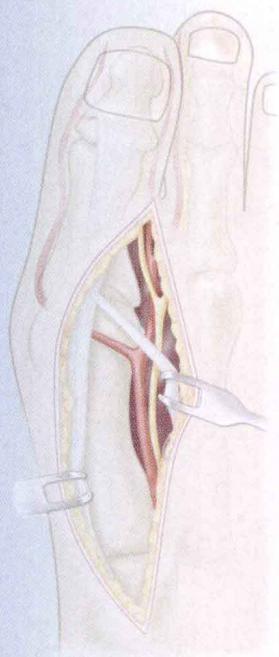
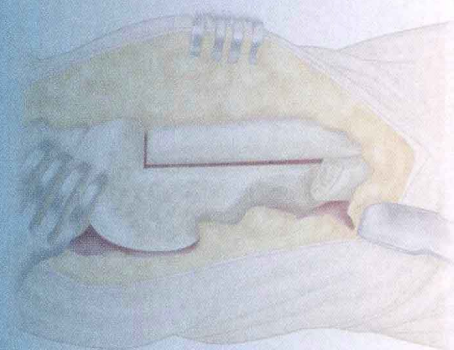
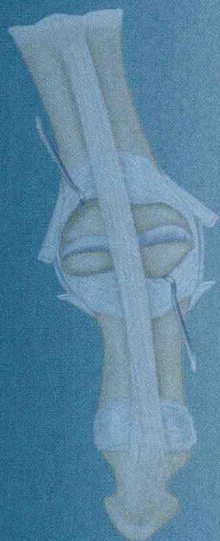
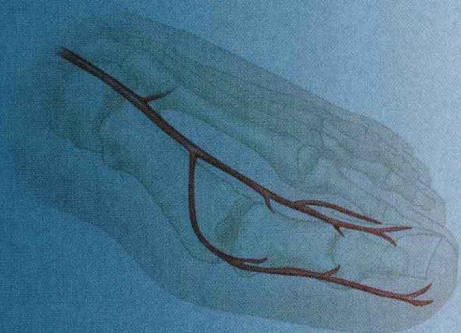
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FOREFOOT

SECTION I



Hallux Valgus Correction with Modified Chevron Osteotomy

Glenn B. Pfeffer



Indications

- Painful hallux valgus deformity
- Failure of shoe modification
- Symptoms that interfere with daily activities
- A mild to moderate deformity (hallux valgus angle $<30^\circ$; intermetatarsal angle [IMA] $<13\text{--}15^\circ$)
- Patients with a high distal metatarsal articular angle (DMAA) require a chevron osteotomy with the addition of a closing wedge.

PITFALLS

- *Arthritic changes of the joint are usually a contraindication to hallux valgus surgery.*
- *Compromised blood supply.*
- *Ulceration over the bunion prominence.*
- *An IMA of more than $13\text{--}15^\circ$.*
- *An extremely hypermobile first ray.*
- *Osteoporosis makes this specific procedure more difficult because of poor screw fixation.*
- *Patients with an excessively short first metatarsal may do better with a basilar opening wedge procedure (using an Arthrex low-profile plate) that does not further shorten the metatarsal.*
- *Avascular necrosis of the metatarsal head is a reported complication of the chevron osteotomy, but rarely occurs if the procedure is performed with precision.*
- *Hallux valgus deformity will recur, to some degree, without some postoperative modification of high-heeled, tight-fitting shoes.*

Controversies

- Hallux valgus correction with a proximal first metatarsal osteotomy is a much more powerful correction than a distal chevron. A proximal osteotomy (see Procedure 4) is a preferable procedure for moderate to severe bunion deformities. While it is possible to “push” the indications for a chevron, there is little point given the superb results of alternative procedures that involve a proximal osteotomy of the metatarsal base.
- A patient with metatarsus adductus will have a spuriously low IMA on radiographs. A proximal osteotomy is often required in these patients, in spite of a low IMA.
- Simultaneous bilateral bunionectomies are technically possible, but present a very difficult recovery for the patient, and are usually not recommended.
- The Acutrak 2 self-drilling/tapping screw negates the difficult step of drilling across the osteotomy.

Treatment Options

- Shoe modification, with lower heels (<2.5 inches) and a wider toe box. Stretch the shoes.
- A medial longitudinal arch support may be helpful in athletic footwear.

Examination/Imaging

- Standing examination of the foot demonstrates a hallux valgus deformity (Fig. 1).
- The bunion prominence is usually erythematous from footwear irritation.
- Examine the interphalangeal (IP) joint to determine if a hallux interphalangeus is present (valgus IP angle >10°). A closing wedge osteotomy of the proximal phalanx may be needed for these cases.
- Evaluate hypermobility of the first ray. A fusion of the metatarsal-cuneiform joint is rarely required.
- Pes planus may be present, but simultaneous surgery for this condition is rarely indicated.

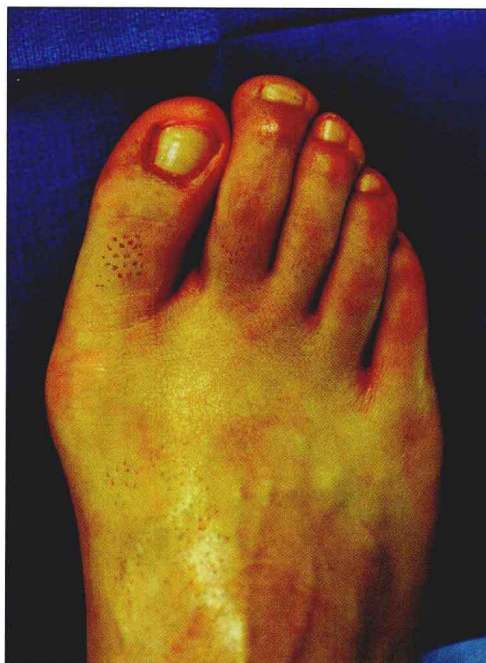


FIGURE 1