# Surgical Guide to Circumcision

David A. Bolnick • Martin Koyle
Assaf Yosha
Editors

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*Editors*
David A. Bolnick, Ph.D.
Department of Urology
University of Washington – Seattle
Children's Hospital
Seattle, WA
USA

Assaf Yosha, M.D.
Department of Family Medicine
University of Rochester
Rochester, NY
USA

Martin Koyle, M.D.
Department of Surgery
University of Toronto
Toronto, ON
Canada

Department of Pediatric Urology
Hospital for Sick Children
Toronto, ON
Canada

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# Foreword

This volume is being written at the same time as the independent production of statements by both the American Academy of Pediatrics and the Center for Disease Control regarding circumcision, its efficacy, and advisability. I first became embroiled in the circumcision debate in 1971 when I was interviewed by a reporter from the Chicago Tribune following the report of the Task Force of the AAP that stated "there is no medical indication for routine circumcision." Shortly thereafter I was asked to write a monograph about circumcision, its methodology, and complications. The research that I did in preparing that piece convinced me that there probably is no procedure that has produced as much emotion and rhetoric as circumcision.

Twenty five years later I was appointed a member of the AAP Task Force on Circumcision that produced its report in 1999. By then, there was some evidence that urinary infections in infants were less frequent after circumcision and that penile cancer was less frequent as well. For that reason the statement that was prepared did not recommend routine circumcision nor did it condemn newborn circumcision. However, the rhetoric that surrounded those deliberations and even more vociferously following the report is, in my opinion, truly astounding.

Since that time there is solid evidence that the incidence of HIV infections, other sexually transmitted diseases, and human papilloma virus carriage rates are all substantially reduced after circumcision. Is that reason enough to recommend routine newborn circumcision? For those who are strongly opposed to circumcision whether for cultural reasons, xenophobic reasons, financial reasons, or blind bias, I am sure the answer will be a resounding NO!

Because there is increased evidence that circumcision does provide some small but definite health advantages, the debate will continue. This volume has attempted to produce a balanced view of the subject. The chapter authors have been prominent on both sides of the debate. Only time will tell whether this volume will help to settle the ongoing arguments or perhaps only further stoke the fires of passion and debate.

CA, USA George Kaplan, M.D.

## About the Authors

David A. Bolnick

Dr. Bolnick is an amalgam of scholar, scientist, technology design guru, media producer, and photographer. Bolnick's contributions have been recognized by numerous achievement awards including seven US Patents (most recent, March 2010), United Nations Outstanding Achievement Award, US Vice President Gore's Hammer Award, seven Telly Awards, California Governor's Media Access Award, Easter Seals' Special EDI Award, two Aurora Awards, AEGIS Award of Excellence, and many others. From 1973, Bolnick's early research interest was in coronary artery flow dynamics followed by vision and retinal physiology. In 1984 he completed his Ph.D. in physiology with a focus on photoreceptor physiology at the University of California, Davis. From 1984 to 1988 Dr. Bolnick undertook post-doctoral studies in photoreceptor membrane biophysics at the University of California, San Francisco. Bolnick switched from basic research to computers/software and in 1990 took a position at Microsoft for the following 10 years. There he designed software, helped redesign software for use by people with disabilities, served on federal committees on accessible technology compliance, and testified before the US Senate, the US House of Representatives, and the Federal Communications Commission on accessible technology for people with disabilities. Currently, Dr. Bolnick is co-owner of a small media production company and is director of its medical media division, MedicoLens.com. In addition, he has served the Pacific Northwest Jewish community as a certified mohel (Jewish ritual circumciser) for nearly a quarter century. Dr. Bolnick is an affiliate faculty in the Department of Urology, University of Washington, Seattle.

Martin Koyle

Martin Koyle is a pediatric urologist, currently living in Toronto, Canada. There he serves as Professor of Surgery and Program Director, Pediatric Urology at the University of Toronto and the Hospital for Sick Children. After growing up in Canada where he received his medical degree (1976), he trained in surgery at Los Angeles County+USC Medical Center and in urology at Harvard Program centered at the Brigham and Women's Hospital in Boston (1980–1984). He then advanced through academic posts at UCLA (1984–1989), University of Colorado, and The Children's Hospital (1989–2008), and the University of Washington and Seattle Children's Hospital (2008–2011). During his almost three decades in academic urology, Dr. Koyle has been known for his multiple innovations and contributions to the fields of pediatric urology and transplantation. He was the first to publish on laparoscopic nephrectomy in infants, introduced the MACE (Malone Antegrade Continence Enema), the Bianchi technique (single incision orchidopexy), and the Bracka hypospadias repair to North America, and also one of the first surgeons to gain experience in the tubularized incised urethral plate hypospadias repair (Snodgrass technique) and to demonstrate its applicability beyond North America to Europe and Asia. He invented and patented the Koyle stent (Cook Inc), which is used around the world for hypospadias and urethral surgery. To date, he has contributed over 200 major publications and chapters to the literature. Recently he has been a co-editor to the textbooks, *Pediatric Urology – Surgical Complications and Management* and *Guide to Pediatric Urology and Surgery in Clinical Practice*. He is Associate Editor of *Dialogues in Pediatric Urology* and serves on the editorial boards of *Pediatric Surgery International* and the *Journal of Pediatric Urology*. Dr. Koyle is past president of the Rocky Mountain Urology Society, the Society for Pediatric Urology, and the American Association of Pediatric Urologists. He is a Fellow of the American College of Surgeons, Fellow of the American Academy of Pediatrics, and Fellow of the Society for Pediatric Urology. In January, 2010, he was elected "on merit" as Fellow of the Royal College of Surgeons for his contributions to urology, pediatric surgery, and pediatric urology internationally, and in particular in the British Isles.

Assaf Yosha

Dr. Assaf Yosha is known for his emphasis on patient and community centered care. He is a family physician at the Woodward Health Center, a Community Health Center that is part of the Anthony Jordan Health Center in Rochester, NY. He is skilled in operative obstetrics and cares for common high risk perinatal conditions. His focus throughout his career has been to provide inner-city underserved residents access to quality healthcare. Dr. Yosha attended Albany Medical College and in 2005 completed his Family Medicine training at NY-Presbyterian Hospital, Columbia. He then spent a year working in tandem with his wife in rural New Zealand and at Indian Health Service facilities in America. In 2007 Dr. Yosha completed an Obstetrics Fellowship training program for family physicians in Seattle, WA, where he established a circumcision clinic which included resident physician training. Now, as a Senior Instructor at the University of Rochester, in the Highland Family Medicine Department, Dr. Yosha teaches residents in the three common circumcision techniques. Besides good technique and cosmetic outcome, he is always aiming to perform and teach a painless procedure with minimal anxiety to the parents. Dr. Yosha also serves the greater Rochester region as a mohel to reform and conservative families. In his spare time he enjoys running, watching films, and spending time with his wife and young daughters.

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# Contributors

**Gregory Adams, M.D.** Division of Urology, Department of Surgery, Oregon Health Sciences University, Portland, OR, USA

**Kristina Adams, MAPM** Department of Theology, Gonzaga University, Spokane, WA, USA

University of Portland, Portland, OR, USA

Resurrection Catholic Parish, Tualatin, OR, USA

**Jonathan Bergman, M.D.** Department of Urology, Los Angeles (UCLA) Medical Center, University of California, Los Angeles, CA, USA

**David A. Bolnick, Ph.D.** Department of Urology, University of Washington – Seattle Children's Hospital, Seattle, WA, USA

**Adrian Bosenberg, M.B., ChB, FFA(SA)** Department of Anesthesiology and Pain Management, University Washington – Seattle Children's Hospital, Seattle, WA, USA

**Anthony A. Caldamone, M.D., MMS, FACS, FAAP** Division of Pediatric Urology, Hasbro Children's Hospital, Providence, RI, USA

Alpert Medical School, Brown University, Providence, RI, USA

**Marc Cendron, M.D.** Department of Pediatric Urology, Harvard School of Medicine, Boston, MA, USA

Department of Pediatric Urology, Children's Hospital Boston, Boston, MA, USA

**Guy Cox, M.A., D.Phil. (Oxon)** Australian Centre for Microscopy & Microanalysis, University of Sydney, NSW, Australia

**Douglas Diekema, M.D., MPH** Division of Bioethics, Department of Pediatrics, University of Washington School of Medicine, Seattle, WA, USA

Treuman Katz Center for Pediatric Bioethics, Seattle Children's Research Institute, Seattle, WA, USA

**Michele Ebbers, M.D.** Department of Pediatric Urologic Surgery, Swedish Medical Center, Seattle, WA, USA

**Mohamed S. El-Sheemy, M.B.B.S., M.Sc., M.D.** Division of Pediatric Urology, Department of Urology, Cairo University Specialized Pediatric Hospital, Cairo, Egypt

**Andrew Freedman, M.D.** Department of Pediatric Urology, Minimally Invasive Urology Institute, Cedars-Sinai Medical Center, Los Angeles, CA, USA

**Prasad P. Godbole, M.B.B.S., FRCS, FRCS (Paeds), FEAPU** Department of Pediatric Urology, Sheffield Children's Hospital, Sheffield, UK

**Richard Grady, M.D.** Department of Urology, University of Washington School of Medicine – Seattle Children's Hospital, Seattle, WA, USA

**Laura Hart, M.D.** Seattle, WA, USA

**R. Guy Hudson, M.D., FAAP** Department of Pediatric Urologic Surgery, Swedish Medical Center, Seattle, WA, USA

**Richard S. Hurwitz, M.D.** Department of Pediatric Urology, Kaiser Permanente Medical Center, Los Angeles, CA, USA

**Micah Jacobs, M.D., MPH** Department of Urology, University of Texas, Dallas, TX, USA

**Byron D. Joyner, M.D.** Department of Urology, University of Washington School of Medicine – Seattle Children's Hospital, Seattle, WA, USA

**George W. Kaplan, M.D., M.S.** Department of Surgery, Rady Children's Hospital, San Diego, CA, USA

**Kenneth E. Katz, M.D.** Centennial, CO, USA

**Jonathan D. Kaye, M.D.** Department of Pediatric Urology, Cook Children's Medical Center, Fort Worth, TX, USA

Department of Pediatric Urology, Children's Healthcare of Atlanta, Emory University School of Medicine, Alanta, GA, USA

**Andrew J. Kirsch, M.D.** Department of Urology, Children's Healthcare of Atlanta, Emory University School of Medicine, Alanta, GA, USA

**Martin Koyle, M.D., FAAP, FACS, FRCS (Eng.)** Department of Surgery, University of Toronto, Toronto, ON, Canada

Department of Pediatric Urology, Hospital for Sick Children, Toronto, ON, Canada

**John N. Krieger, M.D.** Department of Urology, University of Washington, Seattle, WA, USA

**Steve Lerman, M.D.** Department of Pediatric Urology, Los Angeles (UCLA) Medical Center, University of California, Los Angeles, CA, USA

**Chris McClung, M.D., M.S.** Department of Urology, College of Medicine, The Ohio State University, Columbus, OH, USA

**Brian J. Morris, Ph.D., D.Sc., B.Sc. (Hons)** School of Medical Sciences and Bosch Institute, University of Sydney, NSW, Australia

**Kirk Pinto, M.D., FAAP** Urology Associates of North Texas, Cook Children's Hospital, Fortworth, TX, USA

**Hal C. Scherz, M.D.** Department of Pediatric Urology, Children's Healthcare of Atlanta, Emory University School of Medicine, Alanta, GA, USA

**Annette Schröder, M.D., Ph.D.** Department of Paediatric Urology, Hospital for Sick Children, University of Toronto, Toronto, ON, Canada

**Stephanya Shear, M.D.** Southside Urology and Nephrology, Danville, VA, USA

**Warren T. Snodgrass, M.D.** Department of Pediatric Urology, UT Southwestern and Children's Medical Center, University of Texas, Dallas, TX, USA

**Vijaya M. Vemulakonda, M.D., JD** University of Colorado, Denver, CO, USA

Department of Pediatric Urology, Children's Hospital Colorado, Aurora, CO, USA

**Bryan Voelzke, M.D.** Department of Urology, University of Washington, School of Medicine, Seattle, WA, USA

**Duncan T. Wilcox, M.B.B.S., M.D.** Department of Pediatric Urology, Children's Hospital Colorado, Denver, CO, USA

**Assaf Yosha, M.D.** Department of Family Medicine, University of Rochester, Rochester, NY, USA

Anthony Jordan Health Center, Rochester, NY, USA

**Ismael Zamilpa, M.D.** Division of Urology, Department of Surgery, University of New Mexico, Albuquerque, NM, USA

**Ali M. Ziada, M.B.B.S., M.D., FEBU** Departments of Urology and Surgery, University of Kentucky, Lexington, KY, USA

# Introduction

David A. Bolnick, Martin Koyle, and Assaf Yosha

The *Surgical Guide to Circumcision* is a compendium of the who, what, where, why, and most importantly, the how of circumcision. Given that one-third of the world's males have undergone this most ancient of surgical procedures, a contemporary resource on the subject is in order.

Most circumcisions are elective with no acute medical necessity; that is, most are done for religious and cultural reasons. Thus, in addition to being a standard surgical guide for those who perform circumcision, this book is an anthology of circumcision, from its prehistoric roots to its present-day admixture of religion, culture, and medicine.

The *Surgical Guide to Circumcision* is presented in eight parts: Prelude to Circumcision, Anatomy of Circumcision, Newborn Circumcision, Pediatric Circumcision, Adult Circumcision, The Case Against Circumcision, The Case for Circumcision, and Understanding Circumcision.

David A. Bolnick, Ph.D.
Department of Urology,
University of Washington – Seattle Children's Hospital,
Seattle, WA, USA
e-mail: ask@guidetocircumcision.com

Martin Koyle, M.D., FAAP, FACS, FRCS (Eng)
Department of Pediatric Urology, University of Toronto,
Hospital for Sick Children, Toronto, ON, Canada

Assaf Yosha, M.D.
Department of Family Medicine,
University of Rochester,
Rochester, NY, USA

Anthony Jordan Health Center,
Rochester, NY, USA

## Prelude to Circumcision

The chapters in this part review current trends and guidelines and the process of informed consent. Since most circumcisions are elective, the provider must be sensitive to and balance current regional mores with the views and desires of the patient (parents). Furthermore, there is a universal expectation to complete an appropriate informed consent process before performing a circumcision. Since most circumcisions are akin to cosmetic surgery, with no immediate medical benefit, the informed consent process ought to serve as a dialogue between the provider and patient to clarify the reason for the circumcision and to review its medical pros and cons.

## Anatomy of Circumcision

When one asks an experienced surgeon – "what is the key to a successful surgery?" – at the top of their list will undoubtedly be to have a strong command of the anatomy of which you are operating on. Circumcision, as simple and common as it may seem, is no exception. Many common complications of circumcision could be significantly reduced if more providers had a good command of "normal" anatomy and an eye for recognizing the abnormal. Since most circumcisions today are carried out during the newborn period, we focused this part on the anatomy of the newborn phallus with respect to circumcision. Furthermore, given that many, if not most, complications of circumcision are associated with penile anatomy, normal and otherwise, we included the chapter on

complications of circumcision in this part. Lastly, inherent in understanding urogenital anatomy, normal and abnormal, one must begin with its assembly, that is, embryology.

## Newborn Circumcision

The balance of this book clearly tilts toward newborn circumcision. In the USA, most circumcisions are done during the first month of life, a trend that is being seen worldwide. Few would argue that circumcision during the newborn period, given a normal healthy constitution, is easier and safer. Furthermore, newborn circumcision is performed by a wide variety of practitioners with an equally wide range of surgical expertise. Thus, the chapters in this part were written as an equalizer, so to speak, to help in training the novice and to encourage good practice in those who are more seasoned. Additionally, primary care providers and obstetricians, whether or not they perform circumcisions, will find the Chap. 8 an invaluable aid to the physical examination of infant male genitalia.

## Pediatric Circumcision and Adult Circumcision

Though pediatric circumcision and adult circumcision are presented in two separate parts they are more similar than not. Both require special hands-on training, and unlike newborn circumcision fall into the realm of the urologist or surgical specialist. The chapters in these parts are meant to complement the experienced surgeon's training while serving as an introduction to the concepts of non-newborn circumcision for the primary care provider. Furthermore, non-newborn circumcision is most often done as a treatment for an underlying condition. Hence no attempt is made to go into extensive detail of those conditions or the specific approaches that are already in the scope of a committed surgeon.

## Two Sides to an Argument

There are always two sides to an argument, so the editors of this book, taking a neutral position, invited authors to present perspectives and arguments for and against circumcision. Our position was to allow any statement to be included as long as it was sensible and supported by published evidence.

## The Case Against Circumcision

In the first chapter the author presents a reasoned argument against routine circumcision. The author is not anti-circumcision, but is opposed to unwarranted surgery and discusses how standard medical practice can in most cases prevent the need for circumcision. This and the next chapter, which reviews the care and issues of the uncircumcised penis, are valuable resources for all primary care providers caring for patients who wish to remain uncircumcised.

The third chapter presents a caveat that given the teeter-tottered balance between the medical value of circumcision and the risks associated with circumcision the informed consent process may be dubious and that there can be real risks to those who perform neonatal circumcision.

## The Case for Circumcision

In the first chapter the authors present an argument in support of routine circumcision by detailing all the benefits of the procedure. They present an abundance of data that would support circumcision as a lifelong disease sparing practice that outweighs the minor risks of the procedure.

The second chapter reviews the impact of circumcision on sexual function and satisfaction. The author, from his own work and others, shows that circumcision has no negative effect on sexual function and satisfaction, and may in fact offer some benefits – especially so where circumcision programs are being instituted to suppress the spread of heterosexual HIV/AIDS in African countries.

## Understanding Circumcision

In the preceding chapters the focus was on the what and how of circumcision; here we present the who, where, and why. Circumcision is one of the oldest surgeries in the history of mankind. The controversy is no different today in the twenty-first century as it was over 4,000 years ago in the twenty-first century BCE. There have always been two sides to this practice. Some of our earliest evidence from Egypt suggests that different dynasties switched sides; in some, royalty was circumcised and in some the commoner was circumcised. So here we explore the historical, religious, and cultural factors that have sustained the practice of circumcision into the twenty-first century.

In many ways, this part is the most interesting – it shines that proverbial light on an age old flap; a flap that, in its own unique way, has had a significant role in shaping the history of mankind.

## This Book

This book does not take a position pro or con on routine circumcision. Instead, its purpose is to openly provide the history that has led to the propagation of circumcision for cultural and religious reasons, and to identify pertinent information that might benefit the practitioner, and for that matter the patient/parents, in making an informed decision whether to circumcise or not. The authors of each part have attempted, wherever possible, to avoid personal bias and to provide evidence-based information. Regardless, the editors understand that this topic is both controversial and highly emotional – to say the least. We thank the authors for their time and efforts in providing their thoughtful contributions. We also thank Randall Cohen (MedicoLens.com) for all his wonderful illustrations. And, we especially thank our families for supporting us and the commitment we made to complete this project.