

EDITORIAL

Public Whirlpools—The Epidemiology and Microbiology of Disease Edwin E. Geldreich; Anita K. Highsmith; William J. Martone, MD

ORIGINAL ARTICLES

Whirlpool Operation and the Prevention of Infection Barry J. Davis

Pool-Associated Pseudomonas aeruginosa Dermatitis and Other Bathing-Associated Infections
Jay A. Jacobson, MD

Host Factors in Whirlpool-Associated *Pseudomonas* aeruginosa Skin Disease Steven L. Solomon, MD

Characteristics of *Pseudomonas aeruginosa* Isolated
From Whirlpools and Bathers
Anita K. Highsmith; Phuong Nhan Le; Rima F. Khabbaz, MD; Van P. Munn

Experiences With Bacteriological Monitoring of Pool Water Donald A. Schiemann, PhD

SPECIAL SECTIONS

Readers' Forum: Public Health Implications Regarding the Epidemiology and Microbiology of Public Whirlpools Stuart P. Castle, MPH

Infection Control and Employee Health: AIDS Update Part 2 William M. Valenti, MD

Cost Containment in Infection Control: Is Cost Effective Ordering of Microbiology Tests for Infection Control Possible? Henry D. Isenberg, PhD

Reach for advanced protection.

And help wash away the threat of nosocomial infection with improved formula Dial.

Improved Dial protects you and your patients with an advanced technique that makes the active ingredient 3, 4, 4'-

Trichlorocarbanilide even more effective than before. Dial gives you the effectiveness of bacteriostatic protection in a bar soap as mild as soap can be.

As an important part of any hygiene program, Dial helps in removing patient-acquired microorganisms,

reducing nosocomial infections, and providing residual antibacterial action.

In controlled clinical and laboratory tests, Dial has been shown to be effective against ordinary skin flora, as well as pathogenic strains of Staphylococcus aureus, Streptococcus pyogenes, Corynebacterium minutissimum. In both in vitro and in vivo microbiological tests, Dial demonstrated its superior effectiveness against other bar soaps. Dial proved itself to be

ANTIBACTERIAL EFFECTIVENESS
Length of bar is inversely proportional to the becterial count.

ological availability rest nearly five times more effective in vitro antibacterial efficacy than its leading competitor.

> Dial not only has excellent bacteriostatic protection, but is formulated to treat skin gently, even with frequent use. Results of studies using the soap chamber test show that Dial is mild.

Advanced antibacterial effectiveness in a bar soap as mild as soap can be. Reach for Dial. For more information and study references on Advanced Protection Dial, call for our new brochure: Toll-Free 1/800/528-0849.



Information for Authors

Manuscripts should consist of new material based on infection control activities within a health care facility or in the community, from the US or abroad. All clinical research must have been conducted in accordance with guidelines on the protection of human subjects as established by the US Department of Health and Human Services. Articles are accepted with the understanding that they are contributed solely to INFECTION CONTROL, and have not been published previously except in abstract form. Authors will be requested to sign a standard release of copyright form. The journal will cover the general topics of environmental monitoring, surveillance, prevention, immunization, regulation, education, and research related to infection control.

All manuscripts should be submitted in triplicate (with duplicates of figures and tables), typewritten on one side on $8 \approx \times 11$ -inch paper, double-spaced with generous margins. The author should keep a complete copy of the manuscript.

The organization of the paper should be as follows: title page; abstract; introduction; methods; results; discussion; acknowledgments; references; tables; figures and figure legends. The main sections and subdivisions should be indicated by side headings flush with the left margin and two fines above the text. The Arabic numbering system should be used.

Clinical Trials: The Editor requests that authors reporting the results of dinical trials describe clearly the following: 1) eligibility criteria; 2) whether or not subjects were admitted before allocation to one of the study groups; 3) the method of randomization; 4) whether the study was "masked," what specific information was masked and whether subjects, dinicians and evaluators were all masked; 5) the method used to identify neatment complications; 6) an explanation and analysis of subjects lost to follow-up; 7) statistical methods employed; and 8) information which led to the determination of the size of the study groups and the expected differences between groups.

Rapid Publication: A request for rapid publication must be stated in the cover letter and manuscripts should not exceed ten double-spaced, upwritten pages. Such papers will be published within three to four months of acceptance. No comments will accompany rejected papers, but manuscripts may be resubmitted under the normal publication procedures.

Readers' Forum: Brief communications are encouraged of approximately four to six typewritten pages containing information which does not represent a formal study. They may reflect opinions, hypotheses, or impressions related to infection control or summarize unusual experiences in the field.

Title Page: A separate title page should include the following: title of manuscript; author(s); laboratory or institution of origin with city and state; acknowledgment of grant support; address to be used for reprint requests. An abbreviated title, to be used as a running head, should be included. This should not exceed four words. A preliminary report or abstract should be credited by use of a footnote to the title.

Abstract: The abstract, not to exceed 150 words, should summarize the significant information in the paper and be understandable without reference to the text. The use of abbreviations should be avoided.

Tables: Tables should be double-spaced, each on a separate page, and self-contained. Do not use vertical lines or ditto marks. The table number should be typed flush left, with the table title beneath it. Symbols for footnotes are listed below. Abbreviations used in a table should be explained at the bottom of the table after the footnotes.

Figures: Two sets of unmounted glossy prints should be enclosed in separate envelopes. Indicate lightly on the back margin of each figure the number, name of author, and top. Illustration costs in excess of \$50 must be defrayed by the author.

Photographs: Two copies of each photograph should be submitted. Any identifiable human subject must sign a release form before the photograph can be used. Radiographs and other black-and-white material should be submitted as unmounted glossy print, $5'' \times 7''$ size preferred. A separate identification label should be pasted on each print; do not write directly on the print or use paper clips or staples. Photomicrographs or other color materials should be submitted as color transparencies. Actual magnification and staining method should be given where appropriate; electron photomicrographs should have internal scale markers.

Legends: Legends should be double-spaced, each on a separate page.

References: References should be double-spaced, and should be cited consecutively in the text with superscript numbers outside punctuation. A reference to a paper "in press" may be included. Citations such as "in preparation," "submitted for publication," "unpublished data," and "personal communication" should be given in parentheses in the text only. At the end of each article, references should be listed in the numerical order in which they appear in the text. No more than three authors should be listed for each citation; authors after the third should be designated "et al." Abbreviations of the names of the journals should conform to the Index Medicus. Journal titles should be cited as they existed at the time of publication. Unlisted journals should not be abbreviated. Authors are responsible for bibliographic accuracy.

Articles: Annuniziato D, Goldblum I.M: Staphylococcal scalded skin syndrome: A complication of circumcision. Am J Dis Child 1978; 132:1187-1188.

Books: Hoeprich PD: Infectious Diseases, ed 2. New York, Harper & Row Pubs Inc, 1977, p 169.

Contributions to Books: Schaffner W: Psittacosis: Ornithosis, parrot fever, in Beeson PB, McDermott W, Wyngaarden JB (eds): Cecil Textbook of Medicine, ed 15. Philadelphia, WB Saunders Co, 1979, pp 336-338.

Footnotes: Footnotes to the text and tables should be as few as possible. Each should be typed at the foot of the appropriate page, separated from the text or table by a horizontal line. Designate footnotes by the following symbols in this order: *, †, ‡, **, ††, ‡‡.

Abbreviations and Nomenclature: Abbreviations should conform to the American Medical Association Manual for Authors and Editors, published by Lange Medical Publications, Los Altos, California. Abbreviations should be kept to a minimum, preferably confined to the tables. Symbols for units of measurement (eg, mm, ml) should not be followed by periods. Chemical or generic names of drugs are preferred. A proprietary name may be given only after it is preceded by the chemical name the first time it appears. Unfamiliar terms and abbreviations must be defined when first used.

Reviews: Each manuscript will be reviewed by the Editor and at least one other Editorial Board member. Authors will be notified as soon as possible regarding the acceptability of their manuscripts.

Galleys: Galley prints will be sent to the author for approval before the article is printed.

Reprints: The senior author will be sent five complimentary copies of the issue in which the article appears. An order form showing the price for reprints will be sent with the complimentary copies of the issue.

Mail Manuscripts to:

Richard P. Wenzel, MD, Editor INFECTION CONTROL SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086 609/848-1000 800/257-8290

Disinfect Scopes Safely and Completely in just 10 Minutes

In a C.D.C. study, Sporicidin (diluted 1:16) inactivated the Hepatitis B Virus*



An exclusive glutaraldehyde formula

*Journal of Clinical Microbiology, Vol. 18, No. 3, P. 535. To deter whether the HBV could be inactivated by intermediate to high disinfectants, five chimpanzees were each challenged with an inoc treated with a different germicidal chemical. Researchers observed the small amount of direct data, although not conclusive, will ha suffice until a laboratory culture method is developed.

Recommended by All **Major Scope Manufacturers**

is a "tamed" glutaraldehyde that does not yellow or irritate skin or mucous membranes.

is safe for delicate instruments and it will not cloud lenses or clog air/water channels.

(1:16) is tuberculocidal, bactericidal, fungicidal & virucidal (including Herpes I & II, Influenza A2 and Polio I).

Proof Comes from 15 Years of Research and Clinical Use

"In 5000 procedures the cystoscopes were used directly from the Sporicidin soak; there were no known incidents of iatrogenic infection or post-operative irritation. Sporicidin is safe and effective in 10 minutes."

Urology, Vol. 23, No. 2, 1984

"After 3 years and 4001 procedures (laparoscopy, cystoscopy and colonoscopy), we observed (1) no post-operative tissue irritation or infection (2) no lens clouding or endoscope damage (3) preferred by our staff,"

Journal Of The Operating Room Research Institute, Vol. 3, No. 8, 1983

"Sporicidin...was both more stable and more active against test spores than... Cidex and Cidex-7."

Infection Control, Vol. 1, No. 2, 1980

These and other studies available upon request.

NEECTON CONTROL

Table of Contents

Editorial

Public Whirlpools—The Epidemiolog Microbiology of Disease Edwin E. Geldreich; Anita K. Highsmi	•	liam J. Martone, MD	392
Original Articles			
Whirlpool Operation and the Prevent Barry J. Davis	ion of l	Infection	394
Pool-Associated Pseudomonas aerugine Other Bathing-Associated Infections Jay A. Jacobson, MD	osa Der	matitis and	398
Host Factors in Whirlpool-Associated aeruginosa Skin Diseases Steven L. Solomon, MD	Pseude	omonas	402
Characteristics of <i>Pseudomonas aeruge</i> From Whirlpools and Bathers Anita K. Highsmith; Phuong Nhan Lo Rima F. Khabbaz, MD, Van P. Munn		solated	407
Experiences With Bacteriological Mo Donald A. Schiemann, PhD	nitorin	g of Pool Water	413
Special Sections			
Readers' Forum: Public Health Impli Epidemiology and Microbiology of P Stuart P. Castle, MPH			418
Infection Control and Employee Head AIDS Update Part 2 William M. Valenti, MD	lth:		421
Cost Containment in Infection Control of Microbiology Tests for Infection C Henry D. Isenberg, PhD			425
Departments			
Information for Authors	385	Classified Marketplace	428
Letters to the Editor	389		

The ideas and opinions expressed by contributing authors do not necessarily reflect those of the editors or publisher.

Publisher: Infection Control (ISSN-0195-9417) is published monthly by SLACK Incorporated, 6900 Grove Road, Thorofare, New Jersey 08086. Telephone: Thorofare (609) 848-1000.

Copyright 1985: All rights reserved. No part of this publication may be reproduced without written permission from the publisher.

Subscriptions. Requests should be additeased to the publisher (except Japan). In Japan, contact Woodbell Scope Incorporated, Mansui Bldg., 9-18. Kanda Surugadai 2-chorne, Chiyoda-ku, Tokyo 101, Japan. Subscription rates in the US and possessions. Individual: One year.—\$35.00; Two years.—\$60.00; Three years. \$75.00. Institutional: One year.—\$50.00; Two years.—\$75.00; Three years. \$90.00; all other countries: \$15.00 additional each year. Single copies of current issues may be obtained for \$5.00, United States and possessions; \$8.00 all other countries.

Change of address: Notice should be sent to the publisher six weeks in advance of effective date. Include old and new addresses with zip codes. The publisher cannot accept responsibility for undelivered copies. Second-class postage is paid at Thorofare, New Jersey 08086. Postmaster: Send address changes to SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086.

INFECTION CONTROL®/ Editorial Board

EDITOR

Richard P. Wenzel, MD Charlottesville, Virginia

ACTING EDITOR 1985-1986

Dieter H.M. Gröschel, MD Charlottesville, Virginia

SENIOR ASSOCIATE EDITOR

William Schaffner, MD Nashville, Tennessee

ASSOCIATE EDITORS

Sue Crow, RN, MSN Shreveport, Louisiana

John E. McGowan, Jr., MD Atlanta, Georgia

Dennis G. Maki, MD Madison, Wisconsin

SLACK

SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086

Publisher Richard N. Roash

Associate Publisher Eric M. Baloff

Executive Editor Donna Carpenter

Associate Editor M. Lynne Stanwood

Circulation Manager Kevin J. Fenton

Advertising Manager Randall Roash

Classified Advertising Representative Lorraine Giles

EDITORIAL ADVISORY BOARD

Robert C. Aber, MD Hershey, Pennsylvania

Charles S. Bryan, MD Columbia, South Carolina

John P. Burke, MD Salt Lake City, Utah

Marie B. Coyle, PhD Seattle, Washington

Burke A. Cunha, MD Mineola, New York

Richard E. Dixon, MD Trenton, New Jersey

Harvey A. Elder, MD Loma Linda, California

Bruce Farber, MD Pittsburgh, Pennsylvania

Peter C. Fuchs, MD, PhD Portland, Oregon

Richard A. Garibaldi, MD Farmington, Connecticut

Donald A. Goldmann, MD Boston, Massachusetts

Dieter H.M. Gröschel, MD Charlottesville, Virginia

Peter A. Gross, MD Hackensack, New Jersey

Karen Hadley, RN, MPH New Orleans, Louisiana

David K. Henderson, MD Bethesda, Maryland

Peter N.R. Heseltine, MD Los Angeles, California

Cyrus C. Hopkins, MD Boston, Massachusetts

Allen B. Kaiser, MD Nashville, Tennessee

Harold Laufman, MD, PhD New York, New York

William J. Ledger, MD New York, New York

Barbara McArthur, RN, PhD Detroit, Michigan

Rob Roy MacGregor, MD

Philadelphia, Pennsylvania
C. Glen Mayhall, MD
Richmond, Virginia

Ronald Lee Nichols, MD New Orleans, Louisiana

Harry C. Nottebart, Jr., JD, MD Richmond, Virginia

James E. Peacock, Jr., MD Winston-Salem, North Carolina

Frank S. Rhame, MD Minneapolis, Minnesota

William A. Rutala, PhD, MPH Chapel Hill, North Carolina William E. Scheckler, MD Madison, Wisconsin

Robert J. Shannon, MSPH Boston, Massachusetts

Walter E. Stamm, MD Scattle, Washington

Charles W. Stratton, MD Nashville, Tennessee

Timothy R. Townsend, MD Baltimore, Maryland

William M. Valenti, MD Rochester, New York

James Veazey, MD Albany, New York

Kathy J. Wydra, RN Geneva, New York

FOREIGN ADVISORY BOARD

Graham Ayliffe, MD, FRC Path. Birmingham, England

Professor G. Berencsi Szeged, Hungary

Professor Jaap Dankert Groningen, Netherlands

Professor Dr. F. Daschner Freiburg, West Germany

Lars O. Kallings, MD Stockholm, Sweden

Professor W.B. Kędzia Sieroca, Poland

Professor A.P. Krasilnikow Minsk, USSR

Professor Dr. W. Marget Munich, West Germany

Bertil Nyström, MD Huddinge, Sweden

Ian Phillips, MA, MD, MRC Path. London, England

Samuel Ponce de Leon, MD Mexico City, Mexico

Hans Reber, MD Basel, Switzerland

Professor Gerald Reybrouck Leuven, Belgium

Manfred L. Rotter, MD, DipBatt Vienna, Austria

Theodore Sacks, MD ferusalem, Israel

Dr. Bernhard M. Thimm Federal Republic of Germany

Professor Dr. med. H.P. Werner Mainz, West Germany

Professor Dr. W. Weuffen Greifswald, German Democratic Republic