

Environmental Health

Dedicated to the advancement of the environmental health professional

Volume 78, No. 6 January/February 2016

Editor's Note: This special issue features *Journal* articles that were prepublished online in 2015 and made available to NEHA members through My NEHA and the online Store.

ABOUT THE COVER



In this month's cover feature, "Safety Evaluation of Metal Exposure From Commonly Used Hair Dyes and Tattoo Inks in Nigeria," the authors found that tattoo ink samples contained

allergenic metals such as nickel, chromium, and cobalt at concentrations above the suggested limit of 1 µg/g, while metals in the hair dyes were below their respective specified limits in the majority of the samples. To guard against health hazards as a result of exposure to tattoo inks and hair dyes, the authors recommend the establishment of regulatory guidelines for metals in cosmetic products.

See page 26.

Cover photo © sanjatosi | iStock

ADVERTISERS INDEX

American Chemistry Council.....	17
Custom Data Processing.....	31
Digital Health Department, Inc.....	39
Glo Germ.....	25
HealthSpace USA Inc.....	128
ITW Pro Brands.....	2
NACCHO.....	31
NSF International.....	127
Ozark River/Integrity Distribution.....	75
Sweeps Software, Inc.....	5
The Division of Public Health Michigan State University.....	53
The University of Findlay.....	65
University of Illinois Springfield.....	75
Williams Comfort Products.....	65

ADVANCEMENT OF THE SCIENCE

Gender Differences in Respiratory Health of School Children Exposed to Rail Yard-Generated Air Pollution: The ENRRICH Study.....	8
International Perspectives: A Step Towards Improving Food Safety in India: Determining Baseline Knowledge and Behaviors Among Restaurant Food Handlers in Chennai.....	18
International Perspectives: Safety Evaluation of Metal Exposure From Commonly Used Hair Dyes and Tattoo Inks in Nigeria.....	26
International Perspectives: Knowledge and Food Handling Practices of Nurses in a Tertiary Health Care Hospital in Nigeria.....	32
International Perspectives: Assessment of the Physicochemical Quality of Drinking Water Resources in the Central Part of Iran.....	40
Seat Belt Usage Interventions for Motor Vehicle Crash Prevention on the Pine Ridge Indian Reservation, South Dakota.....	46
Special Report: An Expanding and Shifting Focus in Recent Environmental Health Literature: A Quantitative Bibliometric Study.....	54
International Perspectives/Special Report: Pesticide Exposure in the Caribbean: A Case From Nutmeg Processing.....	62
Association Between Low Temperature During Winter Season and Hospitalizations for Ischemic Heart Diseases in New York State.....	66
International Perspectives: Measurements of Arsenic in the Urine and Nails of Individuals Exposed to Low Concentrations of Arsenic in Drinking Water From Private Wells in a Rural Region of Québec, Canada.....	76
International Perspectives: Health Risk Assessment Research on Heavy Metals Ingestion Through Groundwater Drinking Pathway for the Residents in Baotou, China.....	84
International Perspectives: The Impact of Extremes in Outdoor Temperature and Sunshine Exposure on Birth Weight.....	92

ADVANCEMENT OF THE PRACTICE

International Perspectives/Special Report: Radon Risk Communication Strategies: A Regional Story.....	102
Building Capacity: Civic Engagement Builds Capacity for Health Departments.....	108
Direct From CDC/EHSB: Parks: An Opportunity to Leverage Environmental Health.....	112
EH Calendar.....	114

continued on page 4

New feature to the *Journal*—the E-Journal Bonus Article! You will find in this issue the first E-*Journal* bonus article. This article will only be found in the E-*Journal* and replaces the online prepublished article that NEHA used to publish with every issue. These online prepublished articles were made available to NEHA members via the Bookstore and My NEHA and were subsequently published in the January/February issue. Now members can access these articles through their E-*Journal* issues and NEHA will no longer publish the large compendium issue. The E-*Journal* gives NEHA the ability to provide you with another peer-reviewed article in a timely and convenient manner while eliminating the costs related to publishing the large compendium issue. It is our hope that authors and readers alike will see the benefits of the E-*Journal* bonus article.

ADVANCEMENT OF THE PRACTITIONER

Resource Corner..... 116
 JEH Quiz #4..... 117

YOUR ASSOCIATION

President’s Message: *Building the Future Environmental Health Workforce*..... 6
 Special Listing 118
 NEHA News 121
 Special NEHA Members 122
 NEHA 2016 AEC and HUD Healthy Homes Conference..... 123
 DirecTalk: Musings From the 10th Floor: *(Work) Force = Mass x Acceleration*..... 126

E-JOURNAL BONUS ARTICLE

International Perspectives: *Morbidity and Mortality of Residents Living Near a Municipal Solid Waste Landfill in Northwest Italy From 1980 to 2009* E1

don't miss
 in the next *Journal of Environmental Health*

- Formaldehyde Levels in Traditional and Portable Classrooms
- Poor Indoor Air Quality, Mold Exposure, and Upper Respiratory Tract Infections
- The Investigation of Groundwater Contamination in Wicomico County’s Morris Mill Community
- E-*Journal* Bonus Article: Disaster Management Policy Options to Address the Sanitation Challenges in South Africa

Official Publication



Journal of Environmental Health
 (ISSN 0022-0892)

Kristen Ruby-Cisneros, Managing Editor
Elizabeth Donoghue-Armstrong, PhD, Copy Editor
Hughes design|communications, Design/Production
Cognition Studio, Cover Artwork
Soni Fink, Advertising
 For advertising call 303.756.9090, ext. 314

Technical Editors
William A. Adler, MPH, RS
 Retired (Minnesota Department of Health), Rochester, MN
Nancy Culotta, MPH
 Retired (NSF International), Ann Arbor, MI
Elizabeth Donoghue-Armstrong, PhD
 NEHA, Denver, CO
Gary Erbeck, MPH
 Retired (County of San Diego Department of Environmental Health), San Diego, CA
Carolyn Hester Harvey, PhD, CIH, RS, DAAS, CHMM
 Eastern Kentucky University, Richmond, KY
Thomas H. Hatfield, DrPH, REHS, DAAS
 California State University, Northridge, CA
Dhitinut Ratnapradipa, PhD, MCHES
 Southern Illinois University, Carbondale, IL

Published monthly (except bimonthly in January/February and July/August) by the National Environmental Health Association, 720 S. Colorado Blvd., Suite 1000-N, Denver, CO 80246-1926. Phone: (303) 756-9090; Fax: (303) 691-9490; Internet: www.neha.org. E-mail: kruby@neha.org. Volume 78, Number 6. Subscription rates in U.S.: \$135 per year and \$250 for two years. International subscription rates: \$160 per year and \$300 for two years (airmail postage included). Single copies: \$12, if available. Reprint and advertising rates available at www.neha.org/JEH. CPM Sales Agreement Number 40045946.

Claims must be filed within 30 days domestic, 90 days foreign, © Copyright 2016, National Environmental Health Association (no refunds). All rights reserved. Contents may be reproduced only with permission of the managing editor.

Opinions and conclusions expressed in articles, reviews, and other contributions are those of the authors only and do not reflect the policies or views of NEHA. NEHA and the *Journal of Environmental Health* are not liable or responsible for the accuracy of, or actions taken on the basis of, any information stated herein.

NEHA and the *Journal of Environmental Health* reserve the right to reject any advertising copy. Advertisers and their agencies will assume liability for the content of all advertisements printed and also assume responsibility for any claims arising therefrom against the publisher.

Full text of this journal is available from ProQuest Information and Learning, (800) 521-0600, ext. 3781; (734) 973-7007; or www.proquest.com. The *Journal of Environmental Health* is indexed by Current Awareness in Biological Sciences, EBSCO, and Applied Science & Technology Index. It is abstracted by Wilson Applied Science & Technology Abstracts and EMBASE/Excerpta Medica.

All technical manuscripts submitted for publication are subject to peer review. Contact the managing editor for Instructions for Authors, or visit www.neha.org/JEH.

To submit a manuscript, visit http://jeh.msubmit.net. Direct all questions to Kristen Ruby-Cisneros, managing editor, kruby@neha.org.

Periodicals postage paid at Denver, Colorado, and additional mailing offices. POSTMASTER: Send address changes to *Journal of Environmental Health*, 720 S. Colorado Blvd., Suite 1000-N, Denver, CO 80246-1926.



Printed on recycled paper.



PRINTED WITH SOY INK