

Biomedical and Environmental Sciences

Volume 36, Number 6, June 2023

Founded on March 1988

Publication Date June 20, 2023

Indexed by SCI, PubMed, ELSEVIER, CA, WANFANG, CNKI, VIP, CSCD

Responsible Institution: National Health Commission of the People's Republic of China

Sponsor: Chinese Center for Disease Control and Prevention.

Editor in Chief: ZHAO Wen Hua

Deputy Editor in Chief: CHEN Jun Shi George F. GAO WU Zhao Su ZHANG Qun

Editing: Editorial Board of Biomedical and Environmental Sciences

Address: Editorial Office of Biomedical and Environmental Sciences, Chinese Center for Disease Control and Prevention

155 Changbai Road, Changping District, Beijing 102206, China

Tel: 86-10-58900404, 58900455, 58900233

Full Text and Manuscript Submission: www.besjournal.com E-mail: bes@chinacdc.cn

Managing Editor: ZHANG Qun

Publishing: Editorial Office of BES, Chinese Center for Disease Control and Prevention

Printing: Beijing Kexin Printing Co., Ltd

Domestic and Overseas Distribution: Chinese Center for Disease Control and Prevention

Mail-Order: Editorial Office of Biomedical and Environmental Sciences

E-mail: besjournal@sina.com

Annual Subscription for Vol. 36, 2023: RMB: ¥ 1200; USD: \$ 560.00.

CSSN: ISSN 0895-3988 / CN 11-2816/Q

Copyright: © 2023 Published by China CDC. All Rights Reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior permission of BES. Authors are required to grant BES an exclusive license to publish.

Special Statement: All articles published in this journal represent the viewpoints of the authors except where indicated otherwise.

Instructions to Authors: Full instructions are available online at www.besjournal.com.

Copyright © 2023 by China CDC

www.besjournal.com

ISSN 0895-3988



Biomedical and Environmental Sciences

Biomed Environ Sci 2023, 36(6): 481-567

ISSN 0895-3988

CN 11-2816/Q

BES

生物医学与环境科学

Vol.36, No.6, June 2023

Biomedical and Environmental Sciences



Vol.36, No.6, June 2023



NHC
of the PRC



Chinese Center for Disease
Control and Prevention