

# JOURNAL OF PEDIATRIC ENDOCRINOLOGY AND METABOLISM

OFFICIAL JOURNAL OF THE GERMAN SOCIETY FOR PEDIATRIC  
AND ADOLESCENT ENDOCRINOLOGY AND DIABETOLOGY

## EDITOR-IN-CHIEF

*Clemens Kamrath, Freiburg*

## FOUNDING EDITOR

*Harry J. Hirsch, Jerusalem*

## HONORARY EDITOR

*Zvi Laron, Petah Tikva*

*Zvi Zadik, Rehovot*

## ASSOCIATE EDITORS

*Abdullah Bereket, Istanbul*

*Mehul Dattani, London*

*Jan Idkowiak, Birmingham*

*Sebastian Kummer, Duesseldorf*

*Feihong Luo, Shanghai*

*Raja Padidela, Manchester*

*Burcu Öztürk-Hişmi, Istanbul*

*Annette Richter-Unruh, Dortmund*

*Serhap Turan, Istanbul*

## EDITORIAL BOARD

*Tadej Battelino, Ljubljana*

*Claudia Boettcher, Berne*

*Fernando Cassorla, Santiago de Chile*

*George Chrousos, Athens*

*Wayne Cutfield, Auckland*

*Johnny Deladoey, Montreal, QC*

*Rasha Tarif Hamza, Cairo*

*Eli HersHKovitz, Beersheba*

*Stephen LaFranchi, Portland, OR*

*Roberto Lanes, Caracas*

*Warren Lee, Singapore*

*Angelika Mohn, Chieti*

*Margaret Zacharin, Melbourne*

## MANAGING EDITOR

*Anna Kirstein, Leipzig*

DE GRUYTER

Please see the journal's homepage for Abstracting & Indexing Services information.

The publisher, together with the authors and editors, has taken great pains to ensure that all information presented in this work (programs, applications, amounts, dosages, etc.) reflects the standard of knowledge at the time of publication. Despite careful manuscript preparation and proof correction, errors can nevertheless occur. Authors, editors and publisher disclaim all responsibility for any errors or omissions or liability for the results obtained from use of the information, or parts thereof, contained in this work. The citation of registered names, trade names, trademarks, etc. in this work does not imply, even in the absence of a specific statement, that such names are exempt from laws and regulations protecting trademarks etc. and therefore free for general use.

ISSN 0334-018X · e-ISSN 2191-0251

All information regarding notes for contributors, subscriptions, Open access, back volumes and orders is available online at [www.degruyter.com/jpem](http://www.degruyter.com/jpem).

**RESPONSIBLE EDITOR(S)** Prof. Dr. Clemens Kamrath, Professor and Head of the Division of Pediatric Endocrinology and Diabetes, Centre of Child and Adolescent Health, University of Freiburg, Freiburg, Germany, e-mail: [clemens.kamrath@uniklinik-freiburg.de](mailto:clemens.kamrath@uniklinik-freiburg.de)

**PUBLISHER** Walter de Gruyter GmbH, Berlin/Boston, Genthiner Str. 13, 10785 Berlin, Germany

**JOURNAL MANAGER** Heike Jahnke, De Gruyter, Genthiner Str. 13, 10785 Berlin, Germany,  
Tel.: +49 (0)30 260 05 – 220, e-mail: [heike.jahnke@degruyterbrill.com](mailto:heike.jahnke@degruyterbrill.com)

© 2025 Walter de Gruyter GmbH, Berlin/Boston

**TYPESETTING** TNQ Tech Private Limited, Chennai, India

**PRINTING** Franz X. Stücker Druck und Verlag e.K., Ettenheim

**COVER ILLUSTRATION** Medicalpicture/Friedhelm Achenbach

Questions about General Product Safety Regulation: [productsafety@degruyterbrill.com](mailto:productsafety@degruyterbrill.com)



# Contents

## Highlight: Vitamin D as a Tool for Pediatric Health Care

### Editorial

Clemens Kamrath and Anna Kirstein

**Sunlight, supplements, and science: vitamin D as a tool for pediatric health care — 669**

### Mini Review

Chandra Sekhar Devulapalli

**Physical activity and vitamin D in children: a review of impacts on bone health and fitness — 671**

### Original Articles

Li Yuan, Huiyu Wang, Yan Luo and Lei Wang

**Association between overweight or obesity and vitamin D status in preschool children: an epidemiological survey in Beijing, China, 2021–2023 — 679**

Randa Mahmoud Masoud, Nour Mohamed Abdel-Kader, Abdel-Rahman B. Abdel-Ghaffar, Said Salama Moselhy and Yasmine Ibrahim Elhenawy

**Association between partial remission phase in type 1 diabetes and vitamin D receptor *Fok1 rs2228570* polymorphism — 690**

Joanna Yuet-Ling Tung, Hung-Kwan So, Ka-Man Yip, Sarah Wing-Yiu Poon, Gloria Shir-Wey Pang, Keith Tsz-Suen Tung, Hing-Wai Tsang, Wilfred Hing-Sang Wong and Patrick Ip

**Optimal vitamin D status for Chinese infants in Hong Kong: insights from the relationship between serum 25-hydroxyvitamin D and parathyroid hormone levels — 698**

### Reviews

Luigi R. Garibaldi, Shruti Sastry, Michael J. McPhaul and Christine A. March

**The changing landscape in the evaluation of hypotonic polyuria in children and adolescents: the role of the new copeptin stimulation tests — 703**

Dongxue Pan, Cuilan Lin and Simao Fu

**A systematic review and meta-analysis of the self-reported Pubertal Development Scale's applicability to children — 718**

### Original Articles

Anna Katrine Gaul, Louise Aas Holm, Torben Hansen, Jens-Christian Holm and Cilius Esmann Fonvig

**Assessing prediabetes and cardiometabolic risk in Danish youth with obesity — 725**

Gonul Buyukyilmaz, Keziban Toksoy Adiguzel, Pinar Kocaay, Mehmet Boyraz and Ayse Metin

**Endocrinopathies in children with inborn errors of immunity: a single-center experience — 735**

Xueqian Mao, Xueyi Jin, Ying Hu, Panpan He, Qianwen Yang, Zhiwei Zhang and Lipeng Jing

**Relationship between blood lipids and bone mineral density in healthy preschoolers: a 12-month cohort study — 743**

Melody Zuo, Isabel Gamache, Kaossarath Fagbemi, Felix R. Day, Ken K. Ong and Despoina Manousaki

**The causal role of endocrine disrupting chemicals in pubertal timing: a Mendelian randomization study — 753**

### Case Reports

Noor-ul-ain Mehak, Sommayya Aftab, Abid Ali Qureshi, Anjum Saeed and Huma Arshad Cheema

**Vitamin D dependent rickets type 2A: a case series of two siblings with novel mutation in vitamin D receptor gene responded to high dose oral calcium and calcitriol — 761**

Suzan Süncak, Merve Berfin Aktan Karaca, Semra Gürsoy, Mehmet Kocabey, Korcan Demir, Fatma Ceren Sarioğlu, Ayfer Ülgenalp and Özlem Giray Bozkaya

**Emergence of osteolysis as a new radiological feature in a case with a novel *BMP2* gene variant — 767**

Luís Salazar, Sara Alves Araújo, Mário Rui Correia, Jorge Diogo da Silva, Catarina Matos de Figueiredo, Catarina Prior, Cláudia Amaral, Maria João Oliveira, Ribeiro Castro and Teresa Borges

**Rare case of ACTH-independent Cushing syndrome: diagnostic challenges and management — 772**