

International Journal of Basic & Applied Physiology

Publisher: Society of Basic & Applied Physiology

Chief Editor: Dr. R. Dixit

Language: English

Periodicity of Journal: Annual

*Place of Publication: Department of Physiology,
B.J. Medical College,
Civil Hospital,
Ahmedabad.*

IJBAP is indexed in Index Copernicus, OAJI, IIFS, ISRA-JIF,
Journal Index, Cite Factor, DRJI.

IJBAP is listed in ICMJE database.

Now Indexed in National Library of Medicine Catalog

Indexed in PubMed (For Selected Citations)



EDITORIAL TEAM

Chief Editor

R. Dixit

Dean, GMC, Surat, Gujarat

Sr. Associate Editor

Amitabh Dubey

Professor & Head, Physiology, SMS MC, Jaipur, Rajasthan

Associate Editor

Jasmin Diwan

Professor & Head, Physiology, GMERS MC, Gandhinagar

Assistant Editors

Saurin Sanghavi

Tutor, Physiology,
B. J. Medical College, Ahmedabad

Anup Patel

Assistant Professor, Physiology,
GMERS MC, Himmatnagar

Paresh Prajapati

Tutor, Physiology,
B. J. Medical College, Ahmedabad

Editorial Board

J. M. Jadeja, Professor & Head, Physiology, BJMC, Ahmedabad, Chairman

Ravi Saxena, Dean, Chirayu Medical College, Bhopal, Vice Chairman

Hemant B. Mehta, Professor & Head, Physiology, GMC, Bhavnagar

Amritlal Mandal, Asst. Research Scientist, Physiology, Arizona University, USA

Rajesh Katare, Senior Lecturer of Physiology, Otago University, New Zealand

Asha Shrivastava, Professor & Head, Physiology, GMC, Bhopal

Neeta Mehta, Professor of Physiology, BJMC, Ahmedabad

Anju Mehta, Additional Professor of Physiology, BJMC, Ahmedabad

Indu Khurana, Sr. Professor, PGIMS, Rohtak

Brinda Venkatraman, Professor & Head, TNMC, Mumbai

Editorial Advisors

Ramji Singh, Professor, Physiology, AIIMS, Patna

Sabyasachi Sircar, Professor & Head, Physiology, AIIMS, Jodhpur, Rajasthan

A. K. Jain, Professor of Physiology, MAMC, Delhi

S. K. Singh, Professor, Physiology, Karamsad, Gujarat

S. D. Kaudinya, Professor, Physiology, Grant MC, Mumbai

B. N. Panchal, Professor, Psychiatry, GMC, Bhavnagar

Rashmi Vyas, Professor, Physiology, CMC, Vellore

B. P. Tikariha, Professor & Head, Pt. JNMMC, Raipur

Mamoni Dihingia, Professor & Head, Professor, SMC, Silchar

N. Neelambkai, Professor & Head, Coimbatore Medical College

Sushma Sood, Sr. Professor & Head, PGIMS, Rohtak

Note:

1. The duty of the editorial board will be to frame policies of the journal, select panel of reviewers and to look after the economy of the journal.
2. The duty of editorial advisors will be to advise editorial board on above matters.
3. The names of panel of reviewers will not be disclosed, the panel will be selected by editorial board.

Guideline to Authors:

The International Journal of Basic & Applied Physiology (IJBAP) [eISSN: 2349-8390] [pISSN: 2320-172X] is an international, indexed, peer-reviewed, Medical Annual Print as well as Online Journal since 2012, published by Society of Basic & Applied Physiology (SBAP) with headquarter at Department of Physiology, B. J. Medical College, Civil Hospital, Ahmedabad. The journal welcomes original research papers in all areas of Physiology. The types of articles we publish are as follows: Editorials, Original researches/studies, Review articles, Short communications, Letters to the editor, Interesting Articles, Current topics and News.

Authorship: All persons designated as authors should qualify for authorship. Authorship credit should be based only on significant contributions to (a) conception and design, or analysis and interpretation of data; and to (b) drafting the article or revising it critically for important intellectual content; and on (c) final approval of the version to be published. **Any work done on MBBS students will not be accepted.**

Submission of manuscript: Communications intended in regards to publication must be sent to editor on ijbap@yahoo.com. Original research paper must be submitted as per template given in our website www.ijbap.weebly.com

Preparation of the Manuscript (for Research Paper)

Manuscript must be written in clear and concise English. Either British or American spelling is acceptable. It must be sent in Microsoft Word format (.doc or .docx).

General format of the research papers should be as follows in given template:

1. Title page
2. Abstract and key words
3. Introduction
4. Material and Methods
5. Results
6. Discussion
7. Conclusion
8. Acknowledgement (if any)
9. Conflict of Interest (if any)
10. References

In general, the length of full research papers should not exceed six printed pages of the Journal. (Each printed page will approximately contain 800 words).

Article should be submitted along with copy right form with consent of all authors in a prescribed form available on our website and also permission letter for any diagram or photograph if reproduced from other source. Copyright filled and signed by all authors and sent scan copy along with the manuscript to the Editor-in-Chief.

Permissions: Authors wishing to reproduce text or figures that have already been published must seek permission from the copyright holder as soon as possible, and copies of permissions granted should be forwarded to the Journal.

Copyright: Papers that have been published, become the property of the Journal and permission to reproduce if any form (either the whole article or a part of it) must be obtained from the Chief Editor.

Confidentiality: The policy of IJBAP is that all submissions are treated as confidential.

Writing style: In order to make the journal uniform & standard we request that all matters submitted for publication should follow "Uniform requirements for manuscripts submitted to biomedical journals" as published by International Committee of Medical Journal Editors (ICMJE) www.icmje.org
For more details see Instructions to Authors in our website www.ijbap.weebly.com

Volume 4, Issue 1, December 2015

Table of Contents

EDITORIAL

REVIEW ARTICLES

- 1 VITAMIN D REVISITED: METABOLISM AND ACTIONS 1

R.K.MARYA

- 2 RELATIVE MERITS OF DIFFERENT CLEARANCE TESTS USED TO MEASURE GFR 14

Ankur , Jahir Ul Haque, M. Desai

- 3 HYPOTHERMIA AS MEDICAL TREATMENT 19

Saleem Saiyad

- 4 FRACTIONAL FLOW RESERVE 24

Neeraj Mahajan, Kartik Patel

ORIGINAL ARTICLES

- 5 RHEUMATOID ARTHRITIS AFFECTS BRAINSTEM AUDITORY EVOKED POTENTIAL 29

Shelja Deswal, Jyoti Yadav, Joginder Gulia, Harpreet Singh, Ashish Arvind

- 6 PREVALENCE OF CHILDHOOD OBESITY IN SCHOOL GOING CHILDREN OF AGE GROUP 5-15 YEARS IN AFFLUENT SCHOOLS OF KOLHAPUR AND NOTE ON THE EFFECT OF DIETARY HABITS AND PHYSICAL ACTIVITY IN OBESE CHILD 34

Indira Anil kurane, Anil .B. Kurane, Sandipan Saha

- 7 CLINICAL NEUROPHYSIOLOGY AS AN OBJECTIVE AID FOR EVALUATION OF LIMB DISABILITY 39

Yogita Dilip Sulaxane , A H.Kale , Jyoti S.Kale, Tejaswini D Sonawane, Rajeshree Meshram, Mr.N.D.Nagral

- 8 MENTAL CHRONOMETRY IN TABLE TENNIS PLAYERS AND FOOTBALL PLAYERS: WHO HAVE FASTER REACTION TIME? 53

Pratik N. Akhani, Harshida Gosai, Samir Mendpara, J. M. Harsoda

- 9 HEART RATE VARIABILITY IN CERVICAL SPONDYLOSIS 58

Mohita Singh, Indu Khurana, Zile Singh Kundu, Anup Aggarwal

- 10 EFFECTS OF HYPERGLYCEMIA ON RENAL FUNCTION IN TYPE-2 DIABETES MELLITUS PATIENTS 62

Sharlin B. Christian, Sudha Parmar, R.S.Trivedi

- 11 PREVALENCE OF PROTEINURIA AND NEPHROPATHY IN TYPE 1 DIABETES MELLITUS 67

Dimplebajaj Arora, Vineet Arora, Mohit Arora, Parminder Kaur Sandhu

12	PREVALENCE OF TASTE BLINDNESS TO PHENYLTHIOCARBAMIDE AMONG SMOKERS Deepika V, Soundariya K, Venkatesh S P, Senthamil selvi K	72
13	A STUDY OF PEAK EXPIRATORY FLOW RATE IN HEALTHY ELDERLY PUNJABI FEMALES Parminder Kaur Sandhu Gill, Dimple Bajaj Arora, Sukhjinder Kaur Dhillon, Mrs. Ravneet Sandhu	78
14	EFFECT OF YOGA AND MEDITATION ON DIFFERENT PHYSIOLOGICAL PARAMETERS (RESPIRATORY & CARDIAC) IN CHRONIC TOBACCO SMOKERS B K Binawara, Rajnee, K C Mathur, R Gupta, M Gupta, P Sharma	83
15	THE CORRELATION OF MALARIA WITH ABO BLOOD GROUP Sharlin B. Christian, R.S.Trivedi, Payal Jivani, Sonal Chavda	89
16	RELATIONSHIP BETWEEN BODY MASS INDEX AND MEAN ARTERIAL PRESSURE IN OBESE ADOLESCENT FEMALES Sonam.D, Nagaraja S., Suresh.Y.Bondade	93
17	BLOOD FLOW INDEX IN LOWER EXTREMITIES OF HEALTHY VOLUNTEERS BY IMPEDANCE PLETHYSMOGRAPHY (IPG) Yogesh Kacha, Anup Vegad, Maulik Varu, Hemant Mehta, C J Shah	97
18	GENDER VARIATION IN HAEMATOLOGICAL PARAMETERS IN HEALTH AND DEVELOPMENT OF ATHEROSCLEROSIS IN LATER LIFE Harshida Gosai, Pratik N. Akhani, B. M. Palan	105
19	TO EVALUATE CARDIOVASCULAR RISK BY ASSESSING ATHEROGENIC INDEX OF PLASMA IN PREHYPERTENSIVES AND HYPERTENSIVES Pooja Sharma, Rajprabha, Bk Binawara, Manoj Gupta, Karampreet Buttar , Bharti Maan	108
20	PHYSIOLOGICAL EFFECTS OF KANGAROOING ON THE NEWBORNS WEIGHING LESS THAN 2000 GRAMS Praveen Kumar Jain, D. Sarkar	113
21	PREVALENCE OF PCOS AND HYPOTHYROID IN OBESE PERSONS VISITING THE HEALTH AND WELLNESS CENTRE IN CENTRAL INDIA” Rahul Mittal , Aditi Mittal , Rajendra Singh , Kushaal Bharang	118
22	A COMPARATIVE STUDY OF VISUAL & AUDITORY SHORT TERM MEMORY IN CHILDREN & TO EVALUATE RECALLING Dipti Bhatt	122
23	LUTEAL PHASE SERUM CALCIUM AND SERUM MAGNESIUM LEVELS IN CAUSATION OF PREMENSTRUAL SYNDROME Garima Sharma, Pooja Tandon	126
24	AN EVALUATION OF DYNAMIC PULMONARY FUNCTION TESTS IN SICKLE CELL ANAEMIA IN RAIPUR DISTRICT, CHHATTISGARH Karishma Singh, D Sarkar	131
25	EVALUATION OF MULTIFOCAAL ERG AND A-SCAN BIOMETRY IN MYOPIC EYES	136

Bonti Bora

- 26 STUDY OF PATTERN REVERSAL VISUAL EVOKED POTENTIAL (PR-VEP) IN 144
PRIMARY OPEN ANGLE GLAUCOMA

Purva Hathila, Chintan Damor, M. Shanishchara, H. B. Mehta, Nilesch Parekh

- 27 INCIDENCE OF EMMETROPICS AND MYOPICS IN ABO BLOOD GROUPS 149

Ankur , Jahir Ul Haque, M. Desai

- 28 INCIDENCE OF BYSSINOSIS, EFFECTS OF INDOOR POLLUTANTS AND 152
ASSOCIATED RISK FACTORS ON LUNG FUNCTIONS AMONG WOMEN WORKING
IN COTTON MILLS

**Suneeta Kalasuramath, Malay Kumar, Surendra Mannan K, D V Deshpande,
Vinodkumar C S**

- 29 NORMATIVE STUDY OF VISUAL EVOKED POTENTIAL IN DIFFERENT AGE 161
GROUPS

M. V. Shanishchara, H. M. Vaghela, H. B. Mehta, C. J. Shah

- 30 STUDY OF COPD IN WOMEN, WHO ATTEND IN THE DEPARTMENT OF 169
RESPIRATORY MEDICINE, AGMC & GBP HOSPITAL

Anjan Das, Debasish Chakraborty

- 31 BENEFICIAL EFFECTS OF ERYTHROPOIETIN ON STRIATAL DOPAMINERGIC 174
NEURONS IN 6-OHDA-TREATED AGED RAT MODEL OF PARKINSON'S DISEASE

**Manisha Gautam, Shalu Chandra, Ravinder Kumar Saran, Shyama Jain, Bal
Krishana**



On The Occasion of Fourth Issue

Dear colleagues,

I am very happy to put this Fourth annual issue of our Physiology Journal in your hand in this year. I feel proud that for last four year IJBAP is published nonstop. Every year our journal reaches a new height and the credit for this goes to entire Editorial Team.

Publication of journal is a part of scientific activity which is the backbone for our Society (Society of Basic and Applied Physiology). We all are professionals and it is our duty to keep our knowledge updated in the present scenario particularly. This will definitely help us in enhancement of our knowledge. I hope that we have built this journal even better year on year and will continue to publish the very best papers in Physiology.

One of the key objectives of research should be its usability and application. This journal attempts to document and spark a debate on the research focused on Physiology and its research. Responsibility of our journal should not be limited to discussion of research articles of Physiology but also include promotion of education and research activity in the subject we encourage not only traditional theoretical and experimental physiological research, but also welcome physiological research that builds on molecular discoveries, and physiological research that connects to clinical states within the journal's domain. In fact, we envision the journal as the best place to publish all of these levels of research.

I have set certain goals which I want to achieve for IJBAP as Editor-in-Chief. I intend to make IJBAP more author-friendly by facilitating easier online submission of articles in keeping with the changing times. I will ensure the publication of articles with good scientific value that will give a boost to the impact factor of our journal and earn us more recognition globally. I wish to appeal to all the authors to diligently follow the guidelines while submitting the articles. I will strive hard to reduce the time lag between article submission and publication for which I seek co-operation from both authors and referees. We are in the process of enrolling more referees on board for expedition of editorial process.

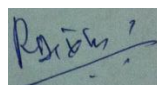
My plans for improving readership experience include good quality printing, improvising IJBAP web site and introducing IJBAP app for smartphones.

You all know our IJBAP is an INDEXED JOURNAL. For last few years, indeed, we get more research articles for publication. Without making any compromise in our laid down standards and policy, it has always remained our effort to make IJBAP more informative, more interesting and more popular so that large number of our colleagues read it and utilize the knowledge and information provided in it.

We appreciate the time and efforts put in by the members of the expert panel for this journal. It is their effort that we are able to talk to you directly on this platform today. We also thank our contributors on this occasion.

Criticism is as important as compliments are. I will be grateful to your feedbacks to help me to match up IJBAP with international quality journals and elevate IJBAP to giddy scientific heights.

Long Live SBAP
Long Live IJBAP



Chief Editor
Raghvendra Dixit M.D (Physiology),
Dean,
GMC, Surat

Forward.....

Message...

Dear friends,

Namaskar.

We are glad to publish this 4th Issue of "International Journal of basic and applied Physiology".

Friends, we are in a difficult time as physiologists in terms of opportunities to our young physiologists. I don't understand the justification of Medical council of India's latest decision of further reduction in requirements of faculties in non-clinical subjects like Physiology, Anatomy etc. This has happened few times successively!

On one hand our standard of research is going down! In India; We are not able to publish any basic, breakthrough research work in physiology since so many years! Even then why Government of India has agreed to such harmful proposal? I don't understand!

I am afraid; this decision has been taken as part of "unholy nexus" between owners of private medical colleges and few people in establishment! If it is true, it very sad for the development of scientific research in India.

Physiology is the mother of at least 15 different specialties and super specialties in medical science! How the off springs can be strong if the mother is not strong?

I also do not agree on giving voting rights in MCI to employee's private medical colleges! All employees of private medical colleges surely follow instructions of their bosses and then how can you control irregularities in private medical colleges? It is very sad that private medical education institutes in India has become hubs of money making business! We have to stop it!

I urge all physiologists of India to unite against such injustice and unfair action and explore legal action also.

As far as this journal is concerned; we are fully trying to maintain the highest ethical standards with co-operation of all of you. As we are asking for a certificate of Heads of the department; it is the duty of all HODs to see and examine genuineness, validity of research work done in his/her department. Please keep this point in mind and we should never promote any undesirable activities.

Thanking you all Dr. Jayendrasinh Jadeja



Dr. J. M. Jadeja
President,
Society of Basic and Applied Physiology

About Society of Basic & Applied Physiology

Regd. No: F/17129/Ahmedabad. Dt. 04/09/2013.

Society of Basic & Applied Physiology is a non-profit private organization having its office located at Department of Physiology, B J Medical College, Ahmedabad, Gujarat, India. This is the first ever Association representing Only Medical Physiologists in India.

Society of Basic & Applied Physiology is dedicated to publish research in all field of Physiology. Their main mission is to enable those who seek the relevant research information on Physiology and make them available in different formats. A long term objective is to provide high quality, accurate and required information to enhance research and innovative concepts in scholarly publishing. Society strictly follows Honesty, Sincerity and ethics.

Activities of Society

Society regularly organizes International Conference every year since 2012 to promote research work of young Physiologists.

Society publishes International Journal of Basic & Applied Physiology to provide platform for Indian as well as International physiologists to publish their research work for physiology fraternity in India and abroad and to provide information about the research work going on internationally.

Address for Communication to Society:

Society of Basic and Applied Physiology,
Department of Physiology,
B.J Medical College,
CIVIL Hospital,
Asarwa,
Ahmedabad: 380 016
Gujarat,
India.