# 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

Now Indexed in National Library of Medicine Catalog
Indexed in PubMed (For Selected Citations)



















#### **EDITORIAL TEAM**

#### **Chief Editor**

R. Dixit

Deputy Director, Medical Education & Research, Gujarat State

## 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

**Anup Patel** 

Paresh Prajapati

Tutor, Physiology,

Assistant Professor, Physiology,

Tutor, Physiology,

B. J. Medical College, Ahmedabad

GMERS MC, Himmatnagar

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 polices 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 advice 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 <a href="https://www.ijbap.weebly.com">www.ijbap.weebly.com</a>

# Volume 5, Issue 1, December 2016

## **Table of Contents**

	EDITORIAL	
	REVIEW ARTICLES	
1	ANKLE BRACHIAL INDEX (ABI)	
	Jinal Pandya, Kartik Patel, Neeraj Mahajan,	1
2	INTEGRATED TEACHING IN MEDICAL EDUCATION IN INDIA	
	Shilpa Khullar	6
	ORIGINAL ARTICLES	
3	ASSESSMENT OF AUTONOMIC FUNCTIONS IN INDIVIDUALS WITH CEREBRAL	
	PALSY	
	Sowmya Panju, B. L.Preethi, G. Jaisri,	15
4	Effect of six-month practice of meditation on stress level in coronary artery	
	disease patients.	
	Shashank Shekhar Sinha	21
5	Correlation of disease duration, smoking pack years and FEV1% predicted with	
	VEP parameters in patients of COPD.	
	Rubiya Shaikh, Rupali Parlewar	29
6	Correlation of adipocytokines and oxidative stress in type 2 Diabetes Mellitus	
	and their association with degree of insulin resistance.	
	Piyali Das, Subhradev Biswas, Subir Kumar Bandyopadhyay, Madhumita	35
	Manna, Gorachand Bhattacharya	
7	Effect of domestic cooking fuel combustion on Peak Expiratory Flow Rates of	
	Indian females	
	Sukhjinder Kaur Dhillon, Narinder Kaur, Parminder Kaur Sandhu, Dimple	40
	Bajaj Arora	
8	Use of soothing music on pain alleviation during intramuscular injection in	
	children	
	Vishaldeep Gohel, Naresh Parmar	44
9	A Comparative Study Of Nutritional Status, Glycemic Status And Lipid Profile In	
	Healthy And Diabetic Patients	
	K Narasimha Rai, **P S Jeganathan	47
10	Yoga As An Exercise Tool: Study Of Physiological Parameters Of The Healthy	
	Subjects	
	Mahajan, Neeraj, Solanki Ashok, Patel, Kartik, Pandey Aparna4	54
11	Effect Of Exercise On Pefr In Healthy Young Adult In Relation With BMI	
	Aditya Ghosh, Wasima Jahan	59
12	Association of ABO blood groups with Diabetes mellitus	
	Dharmendra Dodiya, Anup Patel , J.M.Jadeja	63
13	A Comparative study of recent neuroimaging techniques in pathophysiology of	
	epilepsy	
	Jaishree tapadia, Rahul Mittal	67
14	Correlation of total leucocyte count with blood pressure in petrol pump	
	workers of Surat city	
	Hardik Mistry, Alpna Mathur, Dharitri Parmar, R.Dixit	71
15	Effect of smoking on neurocognitive function	

	Soundariya K, Deepika V, Venkatesh SP	79
16	FLOUR MILL WORKERS OCCUPATIONAL HEALTH IN CHANDRAPUR CITY,	
	CENTRAL INDIA	
	Namrata R. Nimgade, Rahul K. Kamble	84
17	Relation of age, parity and size of the lesion to oestrogen and progesterone	
	receptor status in patients of breast cancer	
	Garima Sharma, Harish matta	90
18	The study of pulmonary function tests in food industry workers	
	Dr. Hitesh Patel, Dr. Jasmin Diwan	95
19	Uterine Artery Doppler Sonography in Second and Third Trimester of IUGR	
	Pregnancies	
	Padmaja R. Desai, S. M. Tiwale, Rajey .M. Desai	99
20	Evaluation of effects of acute exposure to the electromagnetic waves emitted	
	from mobile phone on visual evoked potentials	
	Navneet Kumar Kaushik, Kiran Singh	109
21	Comparative study of effect of Yoga and Meditation on cardio-respiratory	
	efficiency and mental well-being	
	Rajesh Desai, Kena Jasani, Anita Verma, Ramubhai B.Prajapati	114
22	Effect of Cigarette smoking on Haemoglobin and RBC count and RDW (Red cell	
	distribution width)	
	Dinesh J Parmar, Ravindra Ninama, Balaji W Ghugare, Himanshu Chauhan,	118
22	Mukesh Dinkar, DAditi Dholakia	
23	HbA1c – Predictor of early peripheral neuropathy in asymptomatic cases of	
	Diabetes Mellitus	122
24	Patel L.C, Patel R.K,  Diagnostic value of Paraspinal Electromyography in lumbar intervertebral disc	122
24	prolapse	
	Anup Aggarwal, Priyanka Agarwal, Mohita Singh, Nirmal Gurung, Sushma	126
	Sood4, Zile Singh Kundu	120
25	Study Of Qtc Interval In Type-2 Diabetes Mellitus Patient	
	H. M. Vaghela, M. V. Shanishchara , H. B. Mehta, Dr. C. J. Shah	130
26	Effect Of Employement Status Of Mother On The Nutritional Status Of The Pre-	
	School Children Aged 2 To 5 Years	
	B. L. Dariya, Garima Bafna, Neelam Kholiya	136
27	Comparison of sensory nerve conduction in upper limb and lower limb in	
	asymptomatic Diabetics and normal volunteers	
	Swati Mahajan, Jayant Makwana, Prashant Khadayate	141
28	Effect of duration of smokeless tobacco (Gutka) chewing on Lipid Profile	
	Poonam Gogania, Hemeshwar Harshwardhan	146
29	A.C.Users More Prone To Respiratory Problems	
	Deepti Thakur, Elvy Oomen	151
30	Association of body mass index with VO <sub>2</sub> max in Indian adults	155
	Hasmukh Shah, Tejas Prajapati, S. K. Singh	
31	Pathophysiological basis of haematological profile of dengue fever	
	Sonal A.Chavda, Sudha Parmar, R.S.Trivedi	160
32	Study of haematological parameters in anemic pregnant women	
	Jaahnavee Trivedi, Dr. Shaista Saiyad	165
33	Effect of electromagnetic waves emitted from mobile phone on Blink Reflex in	
	normal healthy mobile phone users	

# International Journal of Basic and Applied Physiology

	K.Singh	168
34	A Comparative Evaluation Of Respiratory Indices In Petrol Station Workers Of	
	Agartala.	
	Debasish Chakraborty, Mohit Aggarwal, Debasish Paul	173
35	Comparative study of Maximal grip strength in the Left and right hand in Left	
	Handed and Right handed Individuals	
	ANUP PATEL, RIZWAN QURESHI, P G CHAKRAVARTY	178
36	BODY MASS INDEX (BMI) BASED STUDY OF HEART RATE VARIABILITY IN	
	YOUNG ADULTS	
	Neeru Garg, Priyanka Gupta, Punam Verma, Nidhi Jain , Sunita Mittal,	182
	Satendri Devi	



## On The Occasion of Fifth Issue

Dear Members,

Wishing you all a very happy starting of this winter season.

I am very happy to put this Fifth issue of Our Society's Journal in your hand in this year. I feed proud that for last Five year IJBAP is published non-stop. Every year our journal is creating milestone for its timely publication.

As you all know that with the ending of one season, other starts. Global Warming has led to the changes in the weather very fast. We will have to deal with it as an impact of the Globalization. Same way Physiology is also changing but in better way of course!! Advancement in technology drives scientific discovery. The future of Physiological research and discovery lies with these next-generation technologies. Advances in computational biology, medical imaging, tissue engineering, and many other areas should open exciting new areas of discovery. Accordingly, the education and training of physiologists and other health professionals have changed significantly and continue to change.

As a Journal Publisher, We strongly support research that will benefit physiology and discourages the publication of articles that merely represent pre-established and repetitive facts. The Journal allows publication of articles that may have been reported in literature but from a different region.

Working with our knowledgeable and international Editorial Advisory Board members, I can assure you of a rapid, robust and fair peer-review process.

Thank you in advance for your valuable contributions to the International Journal of Basic & Applied Physiology.

Jay SBAP,



Chief Editor
Raghvendra Dixit M.D (Physiology),
Deputy Director,
Medical Education and Research,
Gujarat State

## Forward.....

Message...

Dear friends,

Jay Bharat

When we started IJBAP, it was a huge challenge to make it a successful and prestigious journal which does not charge any amount from authors, researchers and students.

Now I can say that we have achieved the target in creating confidence amongst authors and physiologists.

The journal has also been Indexed in MCI recognized Indexing Agencies.

I request you all to co operate in building a prestigious, world class Journal with credible scientific material.

We have put confidence in heads of the Department of Physiology. So the onus of maintaining genuineness of the original research article is lying on H O D s of physiology through out India and Abroad.

Great institutions are developed after years of hard work, honesty and building long term credibility.

Our constant aim is to make this institution word class so we don't like to compromise with principles.

Thanking you for your co-operation.

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,

Gujarat India.

International Journal of Basic and Applied Physiology
Int I Basic Appl Physiol 5(1) 2016