

*PRO*  *SENSE*

**175**

**Volume 7**

**Health**

**Compiled by  
Prime Point Srinivasan  
Priyadharshni Rahul  
Srinivas Gopal**

**Prime Point Foundation | Chennai**

First published	June 2015
Second Revised Edition	June 2016
Third Revised Edition	March 2018
Fourth Revised Edition	August 2019
Fifth Revised Edition (in 8 volumes)	September 2021

Copyright © With the publishers – any part of this book may be reproduced with prior information to the publishers and with reference to them.

ISBN 978-93-91803-29-2

Pages 124

Price: Free

Publishers: Prime Point Foundation  
[www.primepointfoundation.in](http://www.primepointfoundation.in)  
[www.corpezine.com](http://www.corpezine.com)  
[editor@corpezine.com](mailto:editor@corpezine.com)

\*\*\*\*\*

## Table of Contents

### **INTRODUCTION ----- 5**

Foreword From Dr. APJ Abdul Kalam For The First Edition  
PreSense100-----6

Preface to the First Edition-----7

Preface to the Second Edition----- 10

Preface to the Third Edition ----- 11

Preface to the Fourth Edition ----- 12

Preface to the Fifth Edition----- 13

Journey of Ezine PreSense - Milestones ----- 14

Editorial Board – October 2021 ----- 16

Prime Point Foundation and its Initiatives----- 17

### **HEALTH ----- 19**

Computer Vision Syndrome – 10 Tips to Protect the Eyes ----- 20

Ten Brain Damaging Habits----- 22

ABC of Diabetes ----- 24

Attitude is Everything: A Simple Calculator----- 26

Premenstrual Syndrome (PMS) ----- 27

ABC of Dental Care----- 30

Macular hole ----- 32

Life Expectancy Has Gone up; The Present Generation May Spend More Years Sick -----	34
2500 People Die Every Day Due to Tobacco Use in India - Tobacco and Alcohol – a Deadly Combination -----	35
Generic Medicines -----	37
<i>Yoga Nidra</i> , a Powerful Tool for Body-Mind Relaxation -----	40
Siddha System of Medicine – Its Potential and Its Challenges --	45
Dr Abdul Kalam on Health Care-----	52
Walking is the Best Medicine – Benefits of Barefoot and 8-Shaped Walking -----	53
Rabies, a 100% Fatal Disease That Is 100% Preventable-----	59
Pranayama Helps Reduce Stress and Improves Health -----	64
We Are What We Eat – How Food Affects Our Actions and Behaviour -----	68
Ancient Indian Pranayama Validated by Nobel Laureates -----	74
The Importance of Emotional Quotient (EQ) in Life -----	79
Healthy Lifestyle Helps Reduce the Risk of Dementia -----	83
The Mind Controls our Brain Which Controls our Health -----	86
Laughter is the Greatest Medicine on Earth -----	89
The Dark Side of Laughter -----	94
Bicycling -Your Way to Joy Rides and Reaching Destinations the Healthy Way -----	96

The Alzheimer’s Disease, Where One Forgets, and Fails to Remember -----	102
Provide Siddha System of Medicine The Status It Deserves ---	107
Autism – A Differently Abled Special Condition -----	111
Experience of the Parent of Autistic Child -----	117
Observing 20 Minute Silence Daily can Free you of Illnesses --	119
Managing Success with Right Attitude to Avoid Failure -----	121
Index-----	123

## **Introduction**

## Foreword From Dr. APJ Abdul Kalam For The First Edition PreSense100

Dr. A.P.J. Abdul Kalam  
Former President of India



10, Rajaji Marg  
New Delhi-110011

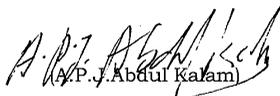
### **FOREWORD**

I am very happy to know that the PreSense monthly ezine published by Prime Point Foundation is bringing out a book based on some of the unique articles, interviews and events published in its editions so far since from March 2006. The 100 issues of the publication have gone through an eventful journey, focusing on knowledge capture and important knowledge dissemination. I recollect my direct association with PreSense in July 2008, when I launched the cartoon character, 'Prince', created exclusively for PreSense.

I see PreSense continuing in its journey under the mentorship of Prime Point Srinivasan, maintaining its status as a must-read ezine, in the fast moving and evolving world of communication, knowledge and connectivity.

I congratulate the Editorial Team of PreSense for bringing out the 100<sup>th</sup> Edition as a Collector's Digest.

28<sup>th</sup> May 2015

  
A.P.J. Abdul Kalam  
C

## **Preface to the First Edition**

The emergence of Internet in the 1980s changed the way of communication globally. When Videsh Sanchar Nigam Limited (VSNL) introduced the internet for commercial use on 15<sup>th</sup> August 1995, India too adopted the new communication model and medium.

Way back in 2002, we published our first electronic newsletter in a move that was viewed as progressive and visionary in nature. After 8 issues, we had to discontinue the newsletter as its electronic form was not regarded contemporary then. In March 2006, we resumed with an ezine titled 'PreSense' with a shift in focus to creating awareness about the essence in personal and corporate communication.

Interestingly, at that time, no bigwig was willing to give an exclusive interview for the re-launching ezine, or even launch it, as there was apprehension about the success of the concept of an electronic magazine. Dr Y S Rajan (co-author of the book, India 2020, with Dr APJ Abdul Kalam) however encouraged us and volunteered to launch the ezine online.

And so we progressed, introducing interesting interviews with eminent personalities recorded on podcast and synchronised with the ezine format, so that the readers were treated to both online reading of contents as well as audio version of interviews. This enabled the readers to a feel of listening to the personalities they have read about in the ezine. We also introduced the concept of Guest Editorship, enabling the association of renowned professionals to share their experience and viewpoints as Editor for the month. This move gave an uplift to the outlook of the ezine and a new trend in its journey ahead.

Many newsletters and ezines launched during the same period were discontinued later for various reasons. PreSense however, survived the test of time and continued till its 60<sup>th</sup> edition in February 2011. After a deliberate brief break of a few months, we resumed the publication of our ezine, with a new look and a shift again in the focus to a social and general theme, with the tagline,

'Spreading Positive Vibrations'. This shift in focus enabled a more holistic approach to the theme and subject of communication. The attention moved to global current news, historically significant events, and knowledge-based breakthroughs in technology. This turned out to be an exciting challenge for the editorial team to sustain the positive strain while including novel and currently interesting topics for the reading pleasure.

Although an ezine might not be comparable with a giant-sized main line medium of communication, it has its own advantages as a medium of reaching out. The *Sansad Ratna* Award Scheme and the Education Loan Task Force were two major initiatives by our ezine, giving it the privilege of being recognised as the host to two major issues of national relevance.

Over a period of 9 years, our ezine has given opportunities to many young people to experience firsthand, the nitty-gritty of digital magazine making, editing and publishing. At the request of many of our loyal readers, we are now bringing out this book called 'PreSense 100', containing 100 plus articles, handpicked from the past 99 editions of our ezine. We felt that the selected articles qualified as a collector's item, and hence this special issue is described as a Collector's Digest. It is our belief that the reader too will appreciate it as one.

Up until now, our ezine has been published, not for commercial gains. We are proud to have many professionals on board, contributing their valuable time and talent in the making of the ezine every month.

I place on record my gratitude and appreciation to all the past Editorial Team Members like Satish Naaraj, Vidya, Tushar Panchal, Veena Vinod, Swetha and innumerable others who contributed immensely to make the ezine a professional one.

I personally thank our ezine's Editorial Team members for their sustained support in bringing out this book. I acknowledge the valuable support given by Susan Koshy, V Rajendran, T N Ashok, Prof. Jagannathan, Sukruti Vadula and Dr Ramamurthy Natarajan for editing and formatting this book.

At this stage, it is pertinent to mention that during the process of publishing every edition of the ezine, there was the collective, professional and committed involvement and input of every editorial team that was associated then. It has been the endeavour of the team to maintain a progressively high standard of the contents and readability of the ezine. We believe these efforts met the expectations of the readers, based on the positive and constructive feedback we kept receiving from our diverse and loyal readership base.

Right from the beginning, we have always been the beneficiary of the blessings and guidance of Dr APJ Abdul Kalam, Former President of India. I also thank Mr V Ponraj, (Scientific Advisor to Dr Abdul Kalam) who supported us in the selection of its contents.

When we planned to publish this book for free distribution, Dr Maria Zeena of Sathyabhama University volunteered to sponsor the cost. I thank her and her team for the noble gesture. I thank Polaris (Padmini and her team) for designing the cover. I thank Sri Logeswari Prints and its owner, Shri M Muthaian for bringing out this book on time.

I thank the innumerable readers and well-wishers who have given unstinted and close-knit support during our journey. Finally, I thank God Almighty for the divine blessings during the journey of 100 editions.

K Srinivasan  
Chairman, Prime Point Foundation  
Editor in Chief, PreSense

\*\*\*\*\*

## **Preface to the Second Edition**

The First edition of PreSense 100 was released in June 2015 as a digest of articles published in the earlier 99 editions. The first edition received an overwhelming response from multifarious groups as students, IAS aspirants, parliamentarians, bureaucrats, and other intellectuals. In view of the support received from the readers, our editorial team decided to come out with the second enhanced edition titled PreSense 100+ with additional articles published between June 2015 and April 2016.

We thank Dr P Ganesan, Chairman of Sony Fire Works (Pvt) Limited and AAA College of Engineering and Technology, Sivakasi who volunteered to sponsor and print this second edition for distribution. The Editorial Team gratefully acknowledges the support given by Shri Bharath Matha Mohan (Educationist at Chennai) and Shri VSM Velmurugan (Chairman of VSM Groups, Kovilpatti) in bringing out this second edition. We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper. We thank innumerable other people who contributed to make this second edition possible.

K Srinivasan  
Editor in Chief  
PreSense

\*\*\*\*\*

## **Preface to the Third Edition**

The first edition of the Digest titled PreSense 100, containing articles published in the first 100 editions of our ezine was released in June 2015. The second enhanced edition titled PreSense 100+, covering 110 editions, was released in June 2016. Due to the overwhelming response from our readers, we are now bringing out the third enhanced edition, covering important articles published in 130 editions of our ezine PreSense. This Digest is titled PreSense 130.

Dr P Ganesan, Chairman of Sony Fire Works (Pvt) Limited and AAA College of Engineering and Technology, Sivakasi has always been a source of inspiration to us. He sponsored the second edition of Digest. This time too, he has volunteered to sponsor and print this third edition for distribution among youth.

We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper. We thank innumerable other people who contributed to make this third edition possible.

K Srinivasan  
Publisher & Mg. Editor  
PreSense

\*\*\*\*\*

## **Preface to the Fourth Edition**

The journey of the eMagazine PreSense since March 2006 is amazing and exciting. During this journey, we were able to publish in the print format three editions Digest of articles published in the 100,110 and 130 issues respectively.

We have been receiving large number of appreciation from readers on the contents of Digest. Enthused by this, we are now pleased to release the fourth edition of digest in digital format titled PreSense150 containing select articles published in the 150 issues.

We thank Dr B Muthukumaran, Co-Founder of Digital Security Association of India (DiSAI) and Advisor to Digital Journalists Association of India (DiJAI) for all technical support in making this eDigest. We also thank Smt. Padmini and her team at Intellect Design for designing the wrapper.

I personally place on record my gratitude to Mrs Susan Koshy, Mr Rajendran, Mr Triambak Sharma and other editorial team members for the sustained support they are giving for successful publication of the eMagazine PreSense every month. We thank innumerable other people who contributed to make this third edition possible.

K Srinivasan  
Publisher & Mg. Editor  
PreSense  
24 August 2019

\*\*\*\*\*

## **Preface to the Fifth Edition**

The eMagazine PreSense which was started in March 2008 on the suggestions of Dr APJ Abdul Kalam for positive journalism has reached the 175th edition in September 2021. This digital only eMagazine is passionately run by a group of eminent volunteers without any commercial motive and without accepting any advertisements.

Looking back, we have published high quality articles on various subjects, including current affairs in every issue. Earlier, we have published Digest of articles after 100, 110, 130 and 150<sup>th</sup> editions. We had the great honour of getting the Foreword from Dr Abdul Kalam himself for the first Digest published at the end of 100<sup>th</sup> edition.

This is the fifth Publication at the end of 175<sup>th</sup> edition. Earlier, we provided all articles in a single book. Due to the large number of important articles, we have grouped all the articles in 8 categories. We are now publishing PreSense175 in 8 volumes covering (1) Indian Heritage, (2) Spotlights from History, (3) Politics and Governance (4) Prince cartoons (5) Media and Communication (6) Science and Technology, (7) Health and (8) General and Exclusives.

I am thankful to Priyadharshni Rahul (Editor), T N Ashok (Consulting Editor), Dr R Jagannathan (Editorial Advisor) and Srinivas Gopal (Technology Advisor) who helped in compiling the select articles published in the past editions.

K Srinivasan  
Publisher and Managing Editor  
PreSense  
26<sup>th</sup> September 2021

## **Journey of Ezine PreSense - Milestones**

Dec 1999	Launch of Prime Point Foundation, Publisher of the ezine.
Feb 2006	Launch of ezine, PreSense online by Dr Y S Rajan.
Aug 2006	Integration of Podcast with the ezine contents.
Aug 2007	Introduction of Guest Editors.
Feb 2008	Second Anniversary Edition with Dr Abdul Kalam's exclusive interview. Masthead changed.
Apr 2008	First ezine to become 'Media Partner' for a global event held at London.
July 2008	Introduction of cartoons – Cartoon Character 'Prince' launched by Dr Abdul Kalam.
Sep 2008	Change in layout, introducing photographs on the cover.
Jan 2010	Ezine's new initiative 'Education Loan Task Force' (ELTF) launched to create awareness among students and parents.
May 2010	Ezine's second initiative to honour top performing Parliamentarians, with the <i>Sansad Ratna</i> Award launched. Golden Jubilee (50 <sup>th</sup> ) Edition launched.
Feb 2011	Diamond Jubilee (60 <sup>th</sup> ) Edition.

### **A hiatus after 5 years of uninterrupted journey**

Apr 2012	Ezine resumed in a new format of contents. The tag line changed from 'Communicate the Communication' to 'Spreading Positive Vibrations'.
Apr 2013	Tamil Nadu Governor launched a special edition on the Indian Parliament, coinciding with the <i>Sansad Ratna</i> Awards.
Jun 2013	Platinum Jubilee (75 <sup>th</sup> ) Edition launched by the youth at three places simultaneously, across the nation.
Jun 2015	100 <sup>th</sup> Edition - PreSense 100 released in print format.
Mar 2016	Ezine's third initiative 'Digital Journalists Association of India' (DiJAI) launched.
Jun 2016	Second edition of PreSense 100+ released in print format

- Dec 2017 Ezine's fourth initiative 'Digital Security Association of India' (DiSAI) launched.
- Mar 2018 Third edition of Digest PreSense130 released in print format.
- Aug 2019 Fourth edition of Digest PreSense150 launched in pdf format.
- Sep 2021 Fifth edition of Digest PreSense175 in 8 volumes released.

The Journey Continues.....

\*\*\*\*\*

## **Editorial Board – October 2021**

### **Publisher and Managing Editor**

K. Srinivasan (Prime Point Srinivasan), Digital Journalist

### **Editor**

Priyadharshni Rahul, Advocate, Supreme Court of India,  
New Delhi

### **Consulting Editor**

T N Ashok, Former Editor, Press Trust of India and freelance  
Journalist at Delhi

### **Cartoon Editor**

Triambak Sharma, Editor, Cartoon Watch, Raipur

### **Editorial Advisors**

Dr R Jagannathan, Provest, Saint Theresa University, West  
Indies

Dr. Sudarshan Padmanabhan, Associate Professor, IIT Madras

Dr Ashok Pandey, Educationist at Delhi and Columnist

Ramesh Sundaram, Senior Journalist

R Nurullah, Senior Journalist and columnist

M B Jayaram, Chairman Emeritus, Public Relations Council of  
India

### **Editorial Team**

Srinivas Gopal, Technology Expert

Nandini Alagar, Digital Marketing Expert, Author, Writer and  
Musician



## Prime Point Foundation and its Initiatives

**Prime Point Foundation**, a Non-Profit Trust and NGO was founded in December 1999 by Shri K Srinivasan (popularly known as Prime Point Srinivasan), a former Senior Banker and a Digital Journalist and Communication Professional, to promote leadership and communication skills among the youth. Very eminent persons are associated with the Foundation.

In the past 21 years, the Foundation has organised several seminars, workshops, training and interactive sessions, both offline and online, on various subjects of national interest. The Foundation manages various online discussion groups and podcasts on communication, and digital journalism.

The Foundation has formed 5 initiatives to create awareness in various domains. All these initiatives are managed independently by passionate experts. These initiatives are non-commercial, and focussed on youth.

**PreSense:** The eMagazine PreSense was started in March 2006 on the suggestion of Dr APJ Abdul Kalam to promote positive journalism. Till September 2021, the Foundation has published 175 editions. This is a digital-only magazine. Digests, containing select articles upto 150 editions of the eMagazine, have so far been published. Dr Abdul Kalam has written the foreword for the Digest of articles upto 100 editions. PreSense publishes the cartoon character Prince, which was launched by Dr Abdul Kalam in 2008. PreSense will be publishing a Digest of select articles published upto 175 editions in the month of September 2021.

**Sansad Ratna Awards:** This is a flagship initiative started in 2010 to honour top performing Parliamentarians every year, based on various performance parameters, and selected by a Jury Committee of eminent Parliamentarians. Dr Abdul Kalam himself inaugurated the first edition of the Awards event in May 2010. Till 2021, the Foundation has conducted 11 editions and presented 75 Awards. IIT Madras was the supporting Partner upto the 9<sup>th</sup> Edition. 10<sup>th</sup> Edition was held at Raj Bhavan, Tamil Nadu. 11<sup>th</sup> Edition was held at Constitution Club of India, New Delhi.



**Next Gen Political Leaders (NGPL)** is an off-shoot of Sansad Ratna Awards. This is a registered NGO operating since 2018.



NGPL has organised several workshops online and offline, for young political leaders and aspirants. Ministers, parliamentarians, legislators and retired constitutional authorities have participated and shared their views. NGPL will shortly be instituting Awards for young promising politicians.

**Education Loan Task Force (ELTF)** was started in 2010 to create awareness about education loans, among students and parents. More than 30,000 queries have been responded to, through email, and more than



5000 serious complaints have been taken up with the top management of the banks concerned, for redressal. Many policy issues have been taken up by Sansad Ratna Awardee MPs, in the Parliament for solution. ELTF does not facilitate loans.

**Digital Journalists Association of India (DiJAI):** DiJAI is an independent NGO founded in 2017 to create awareness about digital journalism and its implications, among the public and particularly among the journalists. DiJAI conducts several



online and offline workshops and seminars, with panels of domain experts.

## **Health**

## Computer Vision Syndrome – 10 Tips to Protect the Eyes

People working on the computers continuously for a long time are likely to be affected by Computer Vision Syndrome

### Symptoms

Irritation in the eyes, watering in the eyes, discomfort, fatigue, mild headache, mild eye ache, brow ache, neck pain etc.

### Precautions to be Taken

1. Do not sit directly under A/C blower. Eye should not get dried up; A/c blow should not be on the eyes.



2. Keep the position of the monitor 24 inches away from your eyes; and 6 inches below your eye level.
3. Every human being blinks the eyes 30 to 40 times a minute. While reading the book, it is reduced to 20 times; while working on the computer, it is reduced to seven times per minute. This leads to dryness of the eyes leading to various symptoms listed above. At frequent intervals, take your eye from the computer and blink your eyes.
4. Follow the 20-20-20 rule. Every 20 minutes, look at an object at 20 feet away for 20 seconds.
5. Do eye exercises (like closing and opening of eyes, palming of your eyes and rotating the eyes in all directions, etc.).
6. Use an anti glare screen in the monitor or use glasses with anti-glare coating.
7. Sit in a comfortable chair with arm rest. Sitting posture is very important to avoid neck pains.

8. Use lubricating eye drops in consultation with your eye doctor.
9. Check up your eyes every six months with your eye doctor. If you have any symptoms, consult the doctor immediately.
10. Your spectacles should be prescribed based on the position of the Computer – distance and position of the monitor.

***Source: May 2008 issue of PreSense***

\*\*\*\*\*

## Ten Brain Damaging Habits

**1. No Breakfast** - People who do not take breakfast could get low blood sugar level, leading to insufficient supply of nutrients to the brain causing brain degeneration.

**2. Overeating** - It causes hardening of the brain arteries, leading to a decrease in mental power.

**3. Smoking** – It causes multiple brain shrinkage and may lead to Alzheimer disease.

**4. High Sugar consumption** - Too much sugar will interrupt the absorption of proteins and nutrients, causing malnutrition and may interfere with brain development.

**5. Air Pollution** - The brain is the largest oxygen consumer in our body. Inhaling polluted air decreases the supply of oxygen to the brain, bringing about a decrease in brain efficiency.

**6. Sleep Deprivation** - Sleep allows our brain to rest. Long term deprivation from sleep will accelerate the death of brain cells.

**7. Head covered while sleeping** - Sleeping with the head covered increases the concentration of carbon dioxide and decreases concentration of oxygen, leading to brain damaging effects.

**8. Working your brain during illness** - Working hard or studying with sickness may lead to a decrease in effectiveness of the brain as well as damage the brain.

**9. Lacking in stimulating thoughts** - Thinking is the best way to train our brain, lacking in brain stimulation thoughts may cause brain shrinkage.

**10. Talking Rarely** – Intellectual conversations will promote the efficiency of the brain.

**Source: June 2008 issue of PreSense**

\*\*\*\*\*



## ABC of Diabetes

Diabetes is a chronic disease that is BEST MANAGED BY YOU, with the support from your family, friends, and the healthcare team. Most people think of diabetes as a disease of high blood sugar, but for many people it is associated with high blood pressure and high cholesterol. Controlling ALL of these factors is important to REDUCE the risk of developing the major complications of diabetes: blindness, foot disease, kidney failure, heart attack, and stroke. In fact, the major cause of disability and death in diabetes is heart disease and stroke. For many persons with diabetes, controlling blood pressure and cholesterol, taking aspirin, and NOT smoking are the most important steps that they can take.

### **DIABETES SELF-MANAGEMENT HEALTH TIPS - ABCs of Diabetes:**

It is important for you to know what the optimum and healthy levels for blood sugar, blood pressure and blood cholesterol are:

**A1c-** Hemoglobin A1c is a 2-3 month average of your blood sugar level. Know your target number!

**Blood Pressure:** Controlling blood pressure is the most effective treatment for preventing cardiovascular disease in persons with diabetes. Check your blood pressure at home. Have your blood pressure checked at every doctor's visit. Know your target level!

**Cholesterol:** Know your cholesterol level goal to protect your heart! Good/Bad Triglycerides (HDL) (LDL)

**Eyes:** Know whether or not you have signs of diabetes related eye disease (retinopathy), and establish a schedule for a dilated (drops in your eyes) eye examination by an eye specialist (optometrist or ophthalmologist).

**Feet:** Check your feet daily. Tell your health provider about any changes. Symptoms of pain and numbness in your feet are not always present, so ask your provider if you see signs of blood vessel or nerve damage in your feet. If you have blood vessel or

nerve damage, you are at higher risk for developing severe foot conditions and should be under the care of a foot specialist.

**Kidney Function:** Protein in urine is an early sign of kidney disease. Your health provider can determine this from a urine and blood test.

**Sick Day Management:** Common illnesses can cause problems for people with diabetes. When you are sick, check your blood sugar every few hours. If your blood sugar remains over 250 or is repeatedly below 70, contact your healthcare team or go to the hospital. Take your insulin or diabetes pills unless you cannot take any food or liquid. Drink liquids every hour to avoid dehydration.

**Smoking:** If you smoke or use tobacco, **STOP!**

**Source: July 2008 of PreSense**

\*\*\*\*\*

## Attitude is Everything: A Simple Calculator

Attitude is everything: A simple calculator

<b>Skills</b>	<b>Level of</b>	<b>+</b>	<b>Attitude</b>	<b>=</b>	<b>Outcome in</b>	<b>Health</b>
<b>Good</b>	<b>+</b>		<b>Good</b>	<b>=</b>	<b>Career &amp; Life</b> <b>Extraordinary success</b>	<b>Very good</b>
Bad	+		Good	=	Success (with efforts and initiatives)	good
Good	+		Bad	=	Temporary success and final downfall	Bad
<b>Bad</b>	<b>+</b>		<b>Bad</b>	<b>=</b>	<b>Disaster</b>	<b>Bad</b>

**Source: August 2006 issue of Ezine PreSense**

\*\*\*\*\*

## **Premenstrual Syndrome (PMS)**

Working women encounter many challenges which women of previous generation never faced. Changing life style, work pressure, aspirations have aggravated certain disorders which are never heard of in Indian women. PMS is one of the serious groups of symptoms which affect most of the working women.

Premenstrual syndrome (PMS) is the name of a group of symptoms that usually start up to 14 days before menstruation. The symptoms usually stop soon after period begins. Most women feel some mild discomfort before their periods. But if you have PMS, you may feel so anxious, depressed or uncomfortable that you can't cope at home or at work. Some of the symptoms of PMS are back pain, bloated abdomen, changes in appetite including cravings for certain foods, constipation, spells of distress, depression, rapid heartbeat, irritability, tension or anxiety, tiredness, headache, hot flushes, joint pain, mood swings, disinterest in sex, tender and swollen breasts, difficulty in concentration, trouble sleeping, swollen hands or feet, wanting to be alone and weight gain.

### **What causes PMS?**

It seems to be linked in part to changes in hormone levels during the menstrual cycle. PMS is not caused by stress or psychological problems, though these may make the symptoms of PMS worse.

### **How is PMS diagnosed?**

Your doctor will ask you to keep track of your symptoms on a calendar. If your symptoms follow the same pattern each month, you may have PMS.

### **How is PMS treated?**

There is no cure for PMS, but eating a healthy diet, exercising regularly and taking medicine may help. Your doctor will talk to you about whether you need to change your diet and exercise habits. He or she may also prescribe medicine for you, depending

on what your symptoms are and how severe they are. Medicines that can be prescribed include diuretics, antidepressants and birth control pills.

### **What are Diuretics?**

Diuretics help your body get rid of extra sodium and fluid. They can ease bloating, weight gain, breast pain and abdominal pain. Diuretics are usually taken just before you would normally experience these symptoms in your menstrual cycle.

### **Do Antidepressants Help?**

Antidepressants can help in cases of severe irritability, depression and anxiety that some women with PMS have. These medicines are usually taken every day.

### **Tips on Controlling PMS**

- Eat complex carbohydrates (such as whole grain breads, pasta and cereals), fibre and protein. Cut back on sugar and fat.
- Avoid salt for the last few days before your period to reduce bloating and fluid retention.
- Cut back on caffeine to feel less tense and irritable and to ease breast soreness.
- Try eating up to 6 small meals a day instead of 3 larger ones.
- Get aerobic exercise. Work up to 30 minutes, 4 to 6 times a week.
- Get plenty of sleep--about 8 hours a night.
- Keep to a regular schedule of meals, bedtime and exercise.
- Try to schedule stressful events for the week after your period.

Identifying this problem, sensitizing life partners and lifestyle

changes and medications, can help woman to cope with the symptoms and make life comfortable for women as well as their family.

***by Dr N Suchitra, Consultant Gynecologist, Tiruchy.***

***Source: August 2008 issue of PreSense***

\*\*\*\*\*

## ABC of Dental Care

### Dental Problems

Dental problems can range from toothaches and tooth decay to cold sores, abscesses and dental phobias. Toothaches are a common dental problem, and can occur even if one is diligent about oral care. However, what seems like a toothache is often the symptom of another condition, trigeminal neuralgia.

### Cosmetic Dentistry

Cosmetic dentistry rectifies gummy smiles, seal gaps, fixes chips and cracks, correct rotations and replaces worn out and discoloured teeth.



### Teeth Whitening

Dental surveys show that 80% of the people prefer whiter teeth. The answer is teeth whitening through a simple and safe procedure called dental bleaching. Bleaching lightens and brightens the teeth. It works on stains and is gentle on the teeth. Coffee, tea, tobacco, red wine, antibiotics and age can stain teeth.

### Tooth Damage and Dental Emergencies

As we all know, toothaches and any type of oral injury can be extremely painful and should be seen by a dentist immediately. These emergencies include broken teeth, teeth that have been knocked out, or teeth that have been forced out of the socket. In some emergencies, the cheeks, lips, or gums near the uprooted teeth, will have cuts or abrasions. If a tooth has been recently knocked out, the first thing to do is to look for that tooth. When the tooth is found, it should be gently scrubbed to get rid of any dirt or debris. Once it is cleaned, it should be placed back in the mouth between the cheek and the gums.

## **Common Causes of Tooth Decay and Infection - Dental Care and Hygiene**

Sometimes food particles get lodged between the teeth. These residual food particles in the mouth breed bacteria. These bacteria can cause infection and tooth decay. Proper oral hygiene can minimise tooth decay and infection. Some methods for effective daily dental care are as follows:

Brush your teeth every day. Brushing removes the residual food particles and plaque. The tooth is embedded in the jaw. (The visible portion of the tooth is called the crown and the hidden, embedded part of the tooth is called the root.) Remember to use a good quality tooth brush and tooth paste.

Flossing should be done every day. Flossing helps remove residual food particles and plaque that the tooth brush fails to remove. A simple practice of rinsing the mouth with water after every meal can be effective in protecting the teeth from infection and decay. Fluorides are useful to prevent tooth decay or caries. It is good to use a tooth paste with the correct amount of fluoride in it.

***by Dr Chandra Gupta. Dentist***

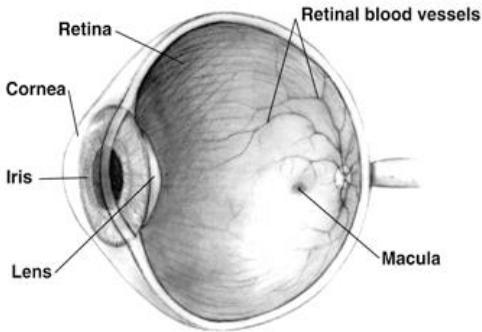
***Source: September 2008 issue of PreSense***

\*\*\*\*\*

## Macular hole

### What is a Macular Hole?

A macular hole is a small break in the macula, located in the center of the eye's light-sensitive tissue called the retina. The macula provides the sharp, central vision we need for reading, driving, and seeing fine detail.



**Why does it occur, at what age and in how many percent of patients is it noted?**

Most of the eye's interior is filled with vitreous, a gel-like substance that fills about 80 percent of the eye and helps it maintain a round shape. The vitreous contains millions of fine fibers that are attached to the surface of the retina. As we age, the vitreous slowly shrinks and pulls away from the retinal surface. Natural fluids fill the area where the vitreous has contracted. This is normal. In most cases, there are no adverse effects.

However, if the vitreous is firmly attached to the retina when it pulls away, it can tear the retina and create a macular hole. Also, once the vitreous has pulled away from the surface of the retina, some of the fibers can remain on the retinal surface and can contract. This increases tension on the retina and can lead to a macular hole. It is generally seen in older age group above 60 years of age. But sometimes and quite rarely, it may occur in younger people also. Some people with high myopia (minus powered spectacles) may develop it at younger age. Sometimes it occurs due to some blunt injury to the eye.

Macular hole can occur in approximately 0.17 to 3.3 % of people among the general population.

**What are the Symptoms of a Macular Hole?**

Initially it causes distortion of central vision. Straight lines may appear crooked. Later on central vision reduces making reading and writing difficult.

### **How is Surgery Done?**

Macular hole requires surgery. In this surgical procedure – called a **vitrectom** – the vitreous gel is removed. A fine membrane on the surface of the retina surrounding the hole, called internal limiting membrane, is peeled off to prevent it from pulling on the retina. The eye is filled with a bubble containing a mixture of air and gas. The bubble acts as an internal, temporary bandage that holds the edge of the macular hole in place as it heals. It is gradually reabsorbed and the eye is filled with natural fluids. Surgery is performed under local anesthesia.

Following surgery, patients must remain in a face-down position, normally for two weeks. This position allows the bubble to press against the macula. Maintaining a face-down position is crucial to the success of the surgery. Because this position can be difficult for many people, it is important to discuss this with your doctor before surgery.

### **What is the Risk of Developing a Macular Hole in the Other Eye?**

There is a 10-15 % risk of developing a macular hole in the other eye. However, there are no preventive measures available as yet.

***By K Srinivasan, Editor in Chief  
with inputs from Dr Dhanashree Ratra, MS, DNB, FRCSEd,  
Senior Consultant, Sankara Nethralaya, Chennai  
Source: February 2009 issue of PreSense***

\*\*\*\*\*

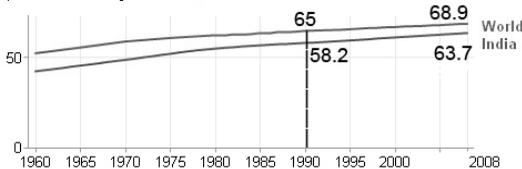
## Life Expectancy Has Gone up; The Present Generation May Spend More Years Sick

According to World Bank report, Life expectancy has gone up from 58.2 to 63.7 years in India. Though apparently, it gives an impression of longevity of life, in reality, the people beyond 50 get extension of life, due to various medical support and due to their healthy life-style and scientific food habit in their growing days.

Presently doctors say that the traditional old age diseases like

### Life expectancy

The average number of years a newborn is expected to live with current mortality patterns remaining the same.



Data source: [World Bank, World Development Indicators](#) - Last updated December 22, 2010

hyper tension, cardiac problems, cancer, diabetes, obesity, stress are now attacking the younger generation even at thirties and forties. This is mainly due to wrong food habits, lack of

physical exercise, mental tension due to deadlines, negative thoughts, unhealthy life style, etc.

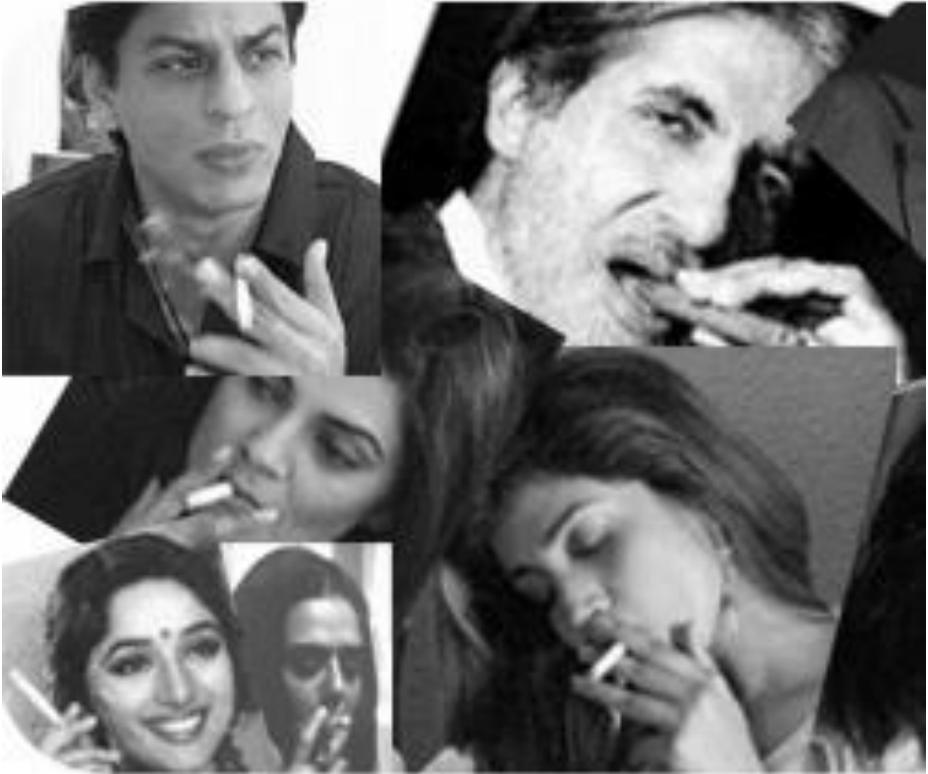
Even if the life expectancy is growing, in future, it is feared that people may spend more years being sick compared to our earlier generation. In the past two decades, people have started spending their life with serious illness and lack of functional mobility.

We need to create an environment where people die without experiencing disease, functioning loss and disability.

**Source: December 2010 issue of PreSense**

\*\*\*\*\*

## **2500 People Die Every Day Due to Tobacco Use in India - Tobacco and Alcohol – a Deadly Combination**



As per the latest study, there are 94 million smokers in India. Of these, about 14 million are ill with chronic obstructive pulmonary disease (COPD). It is the fourth leading cause of adult deaths in India and it has been found to be mostly caused by smoking. In India, about 2500 people die every day from tobacco use, and about 5500 youth start this habit of using tobacco daily. Smoking of Bidis and Cigars cause early death. Tobacco and Alcohol is a deadly combination.

Why do people smoke? Apart from flavour, stress, pleasure, boredom, friendship and taste, there is really one reason for smoking — the rising tide of anxieties. Unfortunately, when the iconic film celebrities like Amitabh Bachchan, Shahrukh Khan, Rajinikanth and Aishwarya Rai smoke in films, they influence many youngsters to take up smoking.

Statistics show that every year, 800,000 new cancer cases are registered — 320,000 of whom suffer from head and neck cancers largely attributed to tobacco habits. While tobacco claims about 4.9 million deaths annually globally, an alarming one million of them are from India. Smoking can cause cancer (lung, mouth, kidney, pancreas and many more to name a few), heart disease, respiratory illnesses and severe dysmenorrhea. Smoking can also cause impotence, ulcers and fertility problems and it does not just harm smokers but the people around also get affected. A passive smoker most likely suffers from lung cancer, glue ear and asthma in children.

A pregnant woman who smokes unintentionally passes harmful chemicals to the unborn child and increases the risk of a miscarriage or neonatal death of the baby.

***By K Srinivasan, Editor in Chief  
with Input from Dr Chandra Gupta. Dentist***

***Source: August 2012 issue of PreSense***

\*\*\*\*\*

## Generic Medicines

Generic medicines are the unbranded bio-equivalent form of drug which is commensurate with branded drugs in terms of their therapeutic value. They are those medicines that are available after the expiry of the patent protection granted to the original researcher of the drug.

Although they are an equivalent substitute to their branded counterparts in all aspects, generic drugs are typically found substantially cheaper than the latter. It is estimated that one could save two-thirds of the cost of the branded drug if one opted for generic drug.

Despite its undeniable potential to reduce the cost of healthcare exponentially, most of the people in India are ignorant about its availability as an option. Some people even suspect the genuineness in the quality of generic medicine because it is inexpensive. Thus, people end up buying branded drugs without realising that they could obtain the same type of medicine for a lower price.

### **The Influence of *Satyamev Jayete***

Generic medicine first caught the attention of the general public of India when this subject was covered in Aamir Khan's TV programme, '*Satyamev Jayate*' (Truth Triumphs), aired on 27<sup>th</sup> May 2012. The episode created large scale awareness about generic medicines among the common people. The manipulative methods of the medical mafia were also revealed to the people. This created a questionable impression about the reputation of Indian doctors in general. A cluster of 21 medical institutions, including the Indian Medical Association (IMA) demanded an unconditional apology from Aamir Khan for 'defamation' of the Indian doctors.

### **Availability of Generic Medicine**

Unfortunately, generic medicines are rarely found in general medical outlets. Most of the medical outlets are inclined to sell

branded medicines instead of generic medicines. The main reason for this is that people tend to have a pre-conceived notion that branded medicines are better than generic medicines. Besides, branded drugs tend to offer higher margins in prices for the pharmacists, while generic medicines are capped in their prices. Till date, the information about the availability of generic medicines is suppressed so that many people are unaware of its availability in the market.

## Jan Aushadhi

*Jan Aushadhi* programme was launched by the Government of India in the year 2008, to provide safe and effective generic drugs at affordable prices. However, *Jan Aushadhi* has so far met with little success.

As of May 2016, there are 261 stores operational in India, predominantly in the northern parts of the country. A total of 615 different generic medicines have been identified. More details can be obtained from the official website:

<http://janaushadhi.gov.in/>

An announcement was made by the Government of India a day after the Union Budget 2016 that it planned to open 3,000 *Jan Aushadhi* stores throughout the country during 2016-2017. Many experts including doctors are sceptical about this model, claiming that the government needed to build trust among the people about generic medicines. Besides, there is still no tested mechanism in place to ensure these medicines are time- and laboratory tested.

**jan aushadhi**

**Jan Aushadhi Stores**

Same medicines at higher prices? Or Same medicines at lesser prices?

**Daam kam, Dawai Uttam**

Jan Aushadhi Stores is a chain of medical stores initiated by the Central Government to offer quality medicines at much lower prices.

Jan Aushadhi stores have been opened in Andhra Pradesh, Delhi, Haryana, Punjab, Rajasthan, Uttarakhand and Orissa. More Jan Aushadhi stores are to be opened shortly.

PRICE COMPARISON CHART (INDICATIVE)				
Name of Salt	Dosage	Pack	Jan Aushadhi Price (Rs.)	Average Market Price (Rs.)
Tab. Ciprofloxacin	250 mg	10	11.00	16.00
Tab. Ciprofloxacin	500 mg	10	21.50	37.00
Tab. Cloxacillin	100 mg	10	5.20	26.70
Tab. Gentamicin	10 mg	10	2.75	10.00
Tab. Paracetamol	500 mg	10	2.45	10.00
Tab. Nitrofurantoin	100 mg	10	2.70	10.00
Cough Syrup	110 ml	10/40	13.30	33.00

For details, please contact Jan Aushadhi Toll-free help line No. 1800 180 80 80  
National Consumer Helpline No. 1800-11-4000 (Toll Free)  
(From BSKL/MTNL, New Delhi) 011-27462955, 56, 57, 58 (Normal Call Charges Apply)  
(9.30 am to 5.30 pm - Monday to Saturday)

Issued in Public Interest by:  
Government of India  
Ministry of Chemicals & Fertilisers  
Department of Pharmaceuticals,  
Shanti Bhawan, New Delhi-110001  
website: www.pharmaceuticals.gov.in

Ministry of Consumer Affairs, Food and Public Distribution  
Department of Consumer Affairs,  
Kirti Bhawan, New Delhi-110001  
website: www.dcpa.nic.in

step 0810113100061011

## Root Cause Analysis

In countries like USA and UK, 70% of the doctor's prescriptions are for generic medicine. This is due to an active governing body, the Food and Drug Administration (FDA) in place in the country to regulate the safety of the medicines.

In India, despite a directive from the Medical Council of India (MCI) to prescribe generic drugs, doctors are reluctant to prescribe generic medicines, claiming they were not as effective as their branded equivalents. 98% of doctors' prescriptions are for branded medicines and the people are forced to buy the brand suggested by the doctor. This escalates the overall healthcare cost of the country.

### **Alternative to Generic Medicine**

Generic medicines have a long way to go before catching up in India but there is an alternative available for buying medicines at competitive prices. Since branding is a subjective term and every company has a different way of branding their medicines, there is a big difference in the pricing among the brands.

Thanks to the power of the internet, there are many websites which provide the generic medicinal equivalent to the prescribed branded medicine. They also list out all the branded medicines available in the market. One such project which is currently the most reputable one is an initiative by the late Dr M.M. Mittal (<http://www.medguideindia.com> ). People can search for the brand of medicine that is priced to suit their budget and their availability, and buy these drugs from wholesalers or large pharmacy shops where the chances of obtaining these specific medicines are better. There are now many pharmacies available online, offering wider choices in the brands and generic to help the people to choose from.

***By Sukruti Narayanan, Editorial Team  
With input from Vivek Hari Narayanan  
Source : May 2016 issue of PreSense***

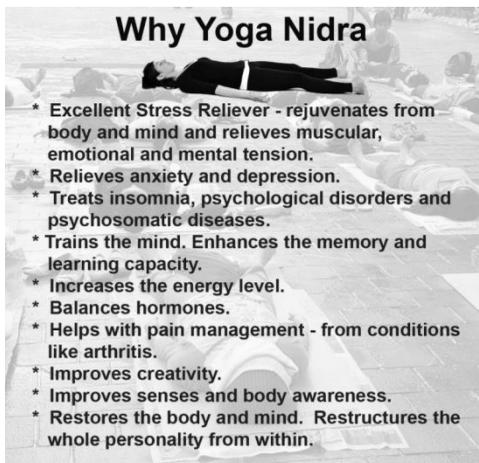
\*\*\*\*\*

## ***Yoga Nidra*, a Powerful Tool for Body-Mind Relaxation**

### **Body-Mind Relaxation**

With changes in life style and pace of modern life, many people today, including youngsters, suffer from diabetes, hypertension, migraine, asthma, ulcer, digestive disorders and skin diseases mainly because of tensions in the body and mind. Even cancer and heart diseases stem from tension. Although modern medicine has tackled these problems in many ways, it is unable to resolve the problems completely. The real problem does not lie in the body, but in the 'mind'. Yoga and meditation provide ways to relax the body and the mind.

*Yoga Nidra* is an ancient but little-known yogic practice that is becoming increasingly popular globally, as a form of meditation and mind-body therapy. *Yoga Nidra* is a systematic form of guided relaxation that is done for 35 to 40 minutes at one time.



Normally, we consider 'sleep' or reclining on an easy chair, taking tea or a drink, and watching television as relaxation. Scientifically, they are not relaxation and they are only sensory diversions. For absolute relaxation, one must remain in a state of awakesness and awareness. *Yoga Nidra* is a state of dynamic sleep. *Yoga Nidra* is a systematic method of inducing complete physical, mental and emotional relaxation. Researchers have proved that those who adopt this technique in their daily routine experience profound positive changes in their sleeping habits and their health.

### **State between Sleep and Wakefulness**

Through a guided session of *Yoga Nidra*, a person can be taken to the state between sleep and wakefulness. In this threshold state, contact with the subconscious and unconscious dimensions occurs spontaneously. In this state where a person is neither in deep sleep nor completely awake, whatever impressions are made in the mind at that time become powerful, and they stay imprinted there. Experiments have proved that knowledge given in this stage is well received by the person. In the ancient times, *Rishis* have imparted knowledge through this technique.

Patanjali describes this state of consciousness as '*pratyahara*', where the mind and mental awareness are dissociated from the sensory channels. *Yoga Nidra* is one aspect of *pratyahara*, which leads to a higher state of concentration and *samadhi*.

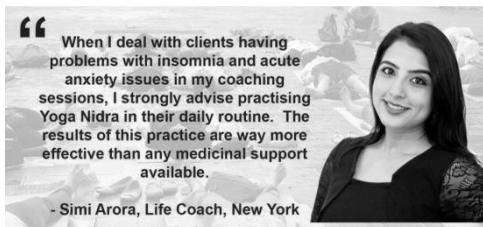
### ***Yoga Nidra* and Meditation**

*Yoga Nidra* takes a person to a 'hypnagogic' state, that is between wakefulness and sleep. In this state, the mind is highly receptive. In meditation, one remains in the waking state of consciousness and gently focusses the mind, while allowing thought patterns, emotions, sensations and images to rise and go.

### **Benefits of *Yoga Nidra***

Swami Satyanada Saraswathi, Founder of Bihar School of Yoga, and who has done an extensive study on *Yoga Nidra* and authored a book on *Yoga Nidra*, says in his book, "The mind is something like a motor car. If you do not handle it properly, you will meet with an accident. But if you are a good driver you know how to manage, whether you are driving a motor car or a truck. Now in *Yoga Nidra*, sometimes, you can go very deep. Although this practice is presently only intended to offer relaxation, its ultimate purpose is take you deep into the state where you are completely united with your inner being".

*Yoga Nidra* is becoming increasingly popular in the United State of America. "After I started on *Yoga Nidra* guided meditation, I felt a



lot of change in the quality of my sleep, my emotional state and my level of clarity. *Yoga Nidra* prepares you to unwind by detaching your mind from repetitive thinking, thereby releasing emotional conflicts, hidden

fears and anxious thoughts. When I deal with clients having problems with insomnia and acute anxiety issues in my coaching sessions, I strongly advise practising *Yoga Nidra* in their daily routine. The results of this practice are way more effective than any medicinal support available”, says Simi Arora, Life Coach from New York in an exclusive interview with PreSense.

She also adds, “I personally have met several Americans who use meditation very frequently in their life to help them deal with anxiety issues and also help them unwind from daily life pressures. One of my clients who practised *Yoga Nidra* got such profound results that it actually healed his insomnia completely. Even in other parts of the western world, it is embraced by many people to help them alleviate the symptoms of stress and insomnia. Even though the science of meditation was cultivated in the eastern world, it is no longer confined to that region.”

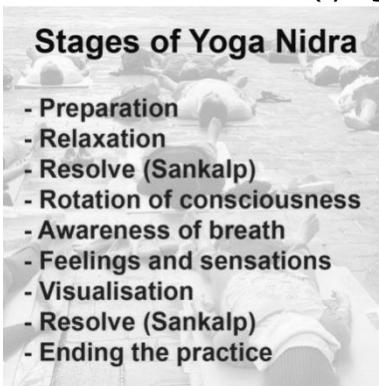
Dr A V Srinivasan, internationally renowned neurologist and former president of ‘Indian Academy of Neurologists’ also agrees that meditation and *Yoga Nidra* help to reduce depression, anxiety, stress, tension and blood pressure.

Various studies indicate that *Yoga Nidra* could help soldiers and veterans suffering from post-traumatic stress disorder (PTSD).

## How to Practise?

*Yoga Nidra* is very easy to practise. Unlike meditation, which is done in a sitting posture, *Yoga Nidra* is done in 'Savasana' (lying down posture). Many creative thoughts have come out in this hypnagogic state.

As already discussed, the mind accepts any suggestion during the hypnagogic state, which is the state between wakefulness and sleep. Any resolution or *Sankalpa* suggested during that state will be powerful enough to transform the personality and direction in life.



*Yoga Nidra* can be practised after regular walking, yoga or exercises. One should practise it on an empty stomach or two hours after food. During the *Yoga Nidra* practice, one should ensure that nobody disturbs them by making noise or touching his/her body.

There are several guided *Yoga Nidra* sessions available on YouTube. PreSense suggests that interested readers download the audio guidance by Swami Niranjananda Saraswathi, the Head of Bihar School of Yoga. He is a born Yogi and has done extensive research on this subject. He was awarded the 'Padma Bhushan' in 2017 by the Government of India for his excellent contribution towards Yoga.

Readers may download the video/audio of guided *Yoga Nidra* from the following links.

For beginners: <https://youtu.be/iXbFQYzsAos>

For second level practitioners:  
<https://youtu.be/WN6q9xQHojI>

Alternatively, the readers may download both the audios from our Google drive link:

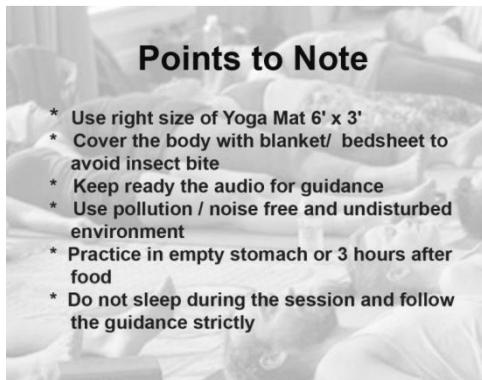
<https://goo.gl/kS6vHD>

Suggested book for reading:  
*Yoga Nidra* by Swami Satyananda Saraswati

(available in Amazon and Flipkart)

(Note: *Yoga Nidra* is a very simple technique. Any person of the age of 15 years and above, with normal health can practise independently, with the help of audio guidance. However, people with any chronic health issues may consult their family doctor beforehand, and begin the practice with the help of a trained Yoga Teacher.)

***By K Srinivasan, Publisher & Managing Editor  
With input from Shri Suresh Veera, Senior Yoga Teacher,  
Chennai  
Source : December 2017 issue of PreSense***



\*\*\*\*\*

## Siddha System of Medicine – Its Potential and Its Challenges

### Outbreak of Dengue and Siddha Medicine



The recent outbreak of the Dengue Fever in the Indian state of Tamil Nadu has once again brought '*Nilavembu Kashayam*', to centre-stage. *Nilavembu Kashayam* is a Siddha medicine made out of nine herbs. This medicine is used both for the prevention and the cure of Dengue, Spine

Flu and Chikungunya Fevers.

The Government of Tamil Nadu has been distributing this medicine in all public places and it also promotes it through the media. In spite of the assurances given by the National Institute of Siddha (NIS) and the Central Council of Research for Siddha (CCRS), a controversy was raised by the comments of some celebrities like actor, Kamal Hassan, and part of the media about the 'scientific validation' of this *Kashayam* (herbal extraction). In spite of this challenge, the Government went ahead with its distribution, as there was no alternative treatment in allopathic medicine. Earlier in 2015, when Chennai suffered heavy floods, the timely administration of *Nilavembu Kashayam* helped prevent an epidemic, saving thousands of lives. Some of the other states in India have started showing interest in the administration of *Nilavembu* for treatment of these diseases.

The *PreSense* Editorial Team initiated a study to understand the uniqueness and challenges faced by the practitioners of the Siddha medicine system. The Team interacted with several practitioners and Siddha promoters, and also visited institutions to obtain a first-hand impression.

### Siddha System of Medicine

Among the traditional systems of medicine in the world, India's Ayurveda and Siddha are said to be very ancient. Although both

the systems of medicine are very similar in practice, Ayurveda is essentially written in Sanskrit, and Siddha is worded in Tamil.

*Siddhas* were the spiritual scientists of ancient India and they laid the foundation for this system of medicine. They possessed tremendous intellectual powers and they lived much longer, sustaining their bodies. They had in-depth knowledge about body and soul. They had expertise in how to use herbs, minerals, metals, poisonous drugs, etc. as medication for treating ailments. By controlling yogic power, they acquired super natural powers. The Siddha system of medicine is stated to be more than 5,000 years old thus proving its efficacy.

Agasthiyar, Bhogar, Theraiyar, Thirumoolar and their disciples were the main *Siddhas* who wrote several hymns in poetic form, on various aspects of the medical system. According to experts, around 100,000 available poems have been published. In these poems, they discuss the anatomy of the body, the pathology, the physiology, the pharmacology and about preventive medicines. Thousands of years ago, *Siddhas* had classified the system into various sections – what the modern system of medicine did 150 years ago. From the available scriptures, it is found that they have dealt with 4,448 diseases and suggested around 3 lakh (300,000) medicinal formulations.

Agasthiyar, in his book '*Garbha Soothram*', talks about the stages of growth of the child in the mother's womb, thus exhibiting his knowledge of the 'human anatomy' and 'embryology'. He has also written about various eye problems and solutions. The Ministry of AYUSH, Government of India maintains a 'Traditional Knowledge Digital Library' as a repository of all the formulations.

## **Diagnosis and Drugs**

The Siddha system follows eight steps in the diagnosis of any disease. They are *Nadi* (pulse), tongue, colour, voice, eyes, touch, stool and urine. The treatment in Siddha medicine is aimed at keeping the three 'Humours' viz. *Vatham*, *Pitham* and *Kapham* at the desired optimum level. The Siddha medicine system believes

that diet and lifestyle together play a major role in maintaining health and in curing diseases.

There are 32 types of drugs in the form of powder, liquid, juice, etc for internal consumption. In the external therapy, they use treatment like fumigation, steaming, paste, massage, application of oil and fermentation.

They extract the ingredients from three sources viz. herbs, minerals & metals (iron, tin, mercury, copper, gold, etc.), and also animals.

### **Difference between Siddha and Modern Medicine (Allopathy)**

According to Dr Velayudham, a well-known Siddha Doctor and a Ph.D holder in Siddha Medicine, the medicine used in Allopathic treatment, attacks the virus of the disease, but may not be able to eradicate the virus fully. But in the Siddha system, the medicine develops immunity in the body itself to fight against the virus.

“Indian medicine is a way of life. The food itself is the medicine – what you eat, the time, and the quantity of the food. Food is supplemented by yoga. Indian medicine is more preventive in nature. Allopathy does not deal with the whole system but the specific condition.

Allopathy is more about reaction. Indian medicine is pro-active.” Says Dr Santhosh Babu IAS, who was the Commissioner of Indian Medicine, Government of Tamil Nadu, and is a doctor in Modern Medicine. Dr Santhosh Babu wants yoga to be introduced at the elementary school level itself, to promote healthy life practices from a very young age.

“Indian medicine deals with the source of the disease and modern medicine focuses on symptoms” says Dr Anitha Balachander, a Molecular-Biologist and Director (Operations) of a leading Ayurveda drug manufacturer.

### **Current Status**

The Siddha system of medicine comes under the Ministry of AYUSH of the Government of India. Dr Anbumani Ramadoss, Member of Parliament, started a separate AIIMS-like Institute (the renowned All India Institute for Medical Sciences, New Delhi), for Siddha called 'National Institute of Siddha' (NIS) in 2005 when he was the Union Health Minister. He also started the Central Council of Research for Siddha (CCRS) to initiate research programmes on Siddha. There are nine educational institutions offering Undergraduate (UG), Post-Graduate (PG) and Doctorate (Ph.D) courses in Siddha. The Central Government had instructed every Primary Health Centre to have at least one AYUSH wing.

### **Challenges**

In spite of being a strong medical system, there is apprehension among the Siddha practitioners that there are vested interests who work on destroying the credibility of Indian systems of medicine. Even recently, the Indian Prime Minister Narendra Modi expressed his concern that during the pre-independence era, yoga and the Indian systems of medicine were ridiculed. Even now, attempts are being made by vested interests to destroy the faith that Indians have in the traditional medical system and treatment.

The most recent occurrence of this threat was seen when the State Government promoted *Nilavembu Kashayam* to fight Dengue Fever. Several attempts were made, using celebrities, to discount the potential of Siddha medicine and dilute the faith of the people. Unfortunately, the Siddha practitioners do not have the muscle power and the money power to counter these threats and attempts. What they lack is a powerful lobby.

A misconception is being spread among the people that Indian medicines contain metals. "In the Indian system, minerals and metals are used in the permitted level. They improve the efficacy and bioavailability of the medicine. People need not have any fear, when they take medicine as prescribed by the doctor", says Dr Anitha Balachander.

There is a general feeling among all the Siddha professionals that the curriculum in the nine government and private educational institutions offering courses in Siddha Medicine, is not being updated regularly. Books published 60 years ago are still used in these institutions for study. In the past 60 years, many new palm leaves bearing ancient knowledge about Siddha medicine, have been discovered and published and they are not updated.

Around 5000 palm leaves, bearing approximately 5 lakh (500,000) hymns, are reported to be lying in various libraries, unexplored. They may contain valuable information on the Siddha system of medicine. Although all the Siddha drugs are being used and administered successfully for centuries, its scientific validation is not available to take it to the global level.

The Government of India started an exclusive Research Council called the Central Council for Research in Siddha (CCRS) in 2005, similar to Indian Council of Medical Research (ICMR). "Presently, 30 projects are under progress. We have completed a drug called D5 for Diabetes patients and it would be released to the public after approval from the Government" says Dr R S Ramaswamy, Director General of CCRS.

### **National Institute of Siddha (NIS)**

NIS was started in 2005 as an apex body, based in Chennai, to offer clinical services and research facilities. It has a 200-bed hospital attached to it. NIS offers PG and PhD courses in various branches of Siddha. Around 2500 patients visit the hospital daily as out-patients and to consult doctors. NIS provides treatment and medicine free for both the in-patients and the out-patients. During the visit, our Team was impressed with the cleanliness, maintenance, treatment and care in the hospital. PG and Research students gain good exposure while dealing with the patients. The clinical data, which is generated daily, can be an excellent document for any scientific validation. We are not sure if proper data base is maintained.



## **Moving to the Next Level**

Dr Anbumani Ramadoss (Former Union Health Minister) and Dr Santhosh Babu IAS, both agree that scientific validation is necessary, to take Siddha to the global level. The Government of India, NIS and CCRS should take initiatives to collaborate with international universities of repute. Your e-Magazine, *PreSense* has offered to actively support their efforts, through the network of the e-Magazine.

Digitising the remaining palm leaves immediately and publishing the text will facilitate in gaining more knowledge about the Siddha system of medicine. This can be done only by the Ministry of AYUSH and the State Government. "We are sitting on a gold mine, without knowing what it is", commented Dr Anbumani Ramadoss. The initiatives started by him should be aggressively pursued.

The curriculum should be updated with latest publications, to cater to modern requirements. The curriculum at present, does not provide them sufficient knowledge and insight to practise. Several students graduating from these colleges are jobless, and they are compelled to divert to the practice of allopathic medicine, for their livelihood.

The common man has faith in the Indian system of medicine. Vested interests aggressively create panic through misguided propaganda to dispel the faith. The Government should counteract the campaign and provide sufficient support to the Indian system of medicine, which is safe and without side effects. In spite of all the counter campaigns, the Tamil Nadu Government recently went ahead with the official distribution of *Nilavembu Kashayam* to protect people from Dengue Fever, as there was no alternative in Modern medicine.

The Private Sector should start Corporate hospitals in Siddha medicine, to attract the middle and upper middle class of people. Just as Kerala uses Ayurveda for 'health tourism', the Government should promote 'health tourism' through the Siddha system of medicine too. It should be promoted through herbal parks, and

Siddha clinics in 'Star Hotels'. Its packaging and marketing should be a professional exercise.

Although the Siddha system deserves palatial status, unfortunately, it 'resides' in a hut. The system deserves to be promoted to its rightful position in the zenith. As Prime Minister Narendra Modi observed, the nations that leave their heritage behind, are destined to lose their identity.

***By K Srinivasan, Managing Editor, and Dr R Jagannathan,  
Editorial Advisor***

***Source: October 2017 issue of PreSense***

\*\*\*\*\*

## Dr Abdul Kalam on Health Care



On 15<sup>th</sup> October 2017, the nation celebrated the 86<sup>th</sup> birth anniversary of Dr APJ Abdul Kalam. As a tribute to him, I would like to republish an exclusive message recorded by me on the "Three-Dimensional Health Care Approach for Youth". This message was recorded on 7<sup>th</sup> October 2009. We

have heard Dr Kalam speaking on the topic of economics, about India Vision, etc. On our specific request that he speak about health care for youth, he gave a spontaneous four-minute message.

In this exclusive message, Dr Kalam suggested that one should spare one hour every day to maintain good health. He suggested a three-dimensional approach viz.

- (1) Fibrous vegetarian food
- (2) Physical exercise, including walking for one hour and
- (3) Meditation for 30 minutes.

He also mentioned in this message that he used to spend one hour in a daily walk, wherever he was. Till the time of his death, Dr Kalam maintained good health, and was very active.

This podcast was released in October 2009. Please listen to this informative podcast. Since this is an important healthcare-related message, please share this podcast with your contacts.

<https://youtu.be/VGKDKEWpptw>

***By K Srinivasan, Managing Editor***

***Source: October 2017 issue of PreSense***

\*\*\*\*\*

## Walking is the Best Medicine – Benefits of Barefoot and 8-Shaped Walking

In October 2009, in an exclusive interview for PreSense, the former President of India, Dr A.P.J. Abdul Kalam suggested a three-dimensional approach for health care viz. 1) a one-hour walk, 2) fibrous vegetarian food and 3) meditation. His interview was republished in the October 2017 issue of PreSense.



The Siddha and Ayurveda systems emphasise the importance of walking. Dr D. Velayudham, a well-known Siddha practitioner and Secretary General of Indian Siddha Medical Association (ISMA) says that even 5000 years ago, *Siddhas* (ascetics) recommended a 'mild walk' (குறு நடை in Tamil) after a meal. "Though modern science may suggest any walk only on an empty stomach or two hours after a meal, I am confident that this will also be accepted in future just as many other traditional practices of Indian medicine have been accepted by modern science, after initial reluctance and rejection", Dr Velayudham added.

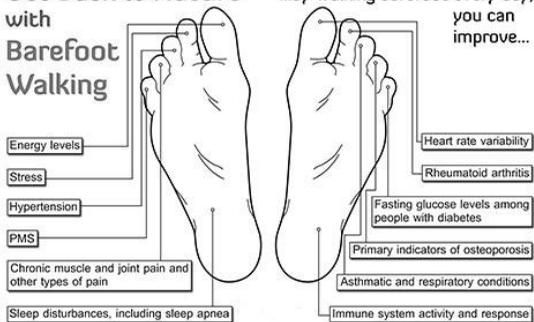
Walking is a natural and automatic human function, from the time the toddler instinctively straightens himself up from all fours, to wobble his way towards steady footsteps. Walking is a way of life. However, the modern man seems to walk less than he should, with transport vehicles, elevators, escalators, walkalators and upright mobility scooters taking over the role of the human legs and feet, for mobility. What was excitement for the toddler and his family, becomes a mundane activity that modern grown-ups do less of.

According to Dr Arul, Chairman of the ARMA Medical Foundation, Chennai, walking can be broadly classified for two purposes viz. 1) general fitness and preventive healthcare, and 2) therapeutic purpose to address specific problems like obesity, high blood pressure, cardiac issues, diabetes, etc. Hippocrates, the Greek physician and "Father of Medicine" seemed to know this when he said 2400 years ago, "Walking is man's best medicine".

If one intends to start walking for therapeutic reasons, one needs to consult the physician before doing so. Dr Arul adds that the benefits of physical activity depend on three elements: intensity, duration, and frequency of the exercise. A morning walk on an empty stomach will address hypertension and risks of heart attack and stroke, because walking strengthens the heart and improves cardiovascular health. It also burns fat. A minimum of 20 minutes of walk every day is essential for an average adult. Before the walk, it is advisable to visit the washroom to clear one's system, and avoid any toxin getting accumulated during the walk. It is preferable to drink sufficient water to avoid dehydration.

Dr Arul says, "Generally, the pulse rate is around 72 bpm (beats per minute) for any normal person in normal conditions. It is likely to increase during walking. The walker should walk at a comfortable pace. He should ensure that he maintains the pulse rate well below 120 bpm to avoid any problems". He also observed that the difference between natural walking and treadmill walking is that in natural walking, the body is in motion on stationary

### Get Back to Nature with Barefoot Walking



ground, whereas on a treadmill, the ground is in motion and the body is stationed. He fears that with treadmill walking, there is the risk of the development of arthritis in the long run.

It is preferable to walk in an open space like a park or even inside the house with proper ventilation. After a regular walk in the forward direction, 'walking backwards' for about 50-100 steps is recommended. Walking backwards, also known as 'retro-walk' helps in the use of the muscles and movements that are otherwise rarely used.

## Barefoot Walking

Energy which is a vital life force, flows in the human body. In India, this energy is called '*prana*' and in China it is called '*chi*'. Death occurs when *prana* or *chi* ceases in the body. This vital energy runs through a meridian system, similar to blood vessels. The ends of these meridians are located in the feet. Barefoot walking stimulates and 'massages' these meridians and in turn, the organs, thus invigorating life's energy flow. This stimulation is especially effective if barefoot walking is done on uneven terrain because of the acupressure effect on the soles of the feet.



It was observed in a study published in the Journal of the American Geriatrics Society that senior adults who regularly walked on cobblestone terrain, displayed improved blood pressure readings when compared to those who walked on regular, flat surface. Their physical and mental health scores too showed improvement. Barefoot walking is as essential for health as the sun is for Vitamin D. Walking on cobblestones also gives the feet the opportunity to use the full set of muscles of the feet involved in walking, as they manoeuvre the uneven terrain, thus improving the health of the feet. (Diabetic patients are advised to consult their doctors before undertaking barefoot walking).

### **Grounding/Earthing**

When the feet are placed directly on the ground or on earth, it is called 'grounding' or 'earthing'. The earth contains abundant negative charge. This electron-rich charge is believed to serve as a good source and supply of antioxidants and free-radical destroying electrons that are absorbable by the soles of the feet, from the ground. This conviction is expressed by Dr James Oschman, a doctorate in biology from the University of Pittsburgh and an expert in the field of energy medicine, based on reports found in the literature and practices of different cultures across the world. Several studies conducted till date support the concept that grounding or earthing the human



body, either by barefoot contact with the ground, or by sleeping on the ground, could be as essential an element for health as sunshine, clean air and water, good food and exercise.

It is interesting to note that what we wear on our feet while walking on the ground determines whether we stay grounded or not. Rubber and plastic soles insulate our body from the earth, just as they do with electric wires. Leather-soles or barefoot on sand, grass, soil, concrete or ceramic tile, aid in being grounded and connected with the electrons of Mother Earth.

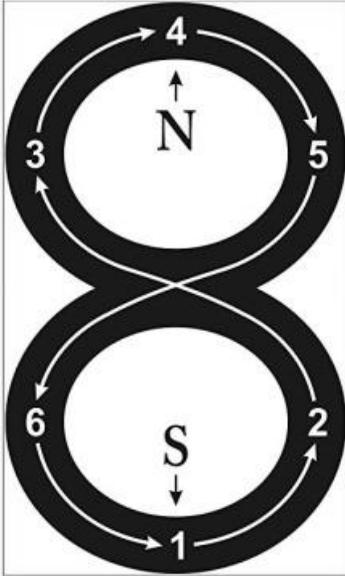
## **8 (Eight)-Shaped Walking**

We know that in a motor driving test for issue of driving licence, the examiner expects the candidate driver to be able to manoeuvre the vehicle in an 8-shape. Driving in an 8-shape requires concentration and motor skills. The same logic applies in 8-shaped walking.

Dr A.V. Srinivasan, a well-known neurologist and President of the Indian Academy of Neurologists explains, "Ancient Siddha literature speaks about 8-shaped walking. This type of walking can help cure Arthritis, Blood pressure issues, Cardiac problems, and Diabetes, and Elevated cholesterol is brought to normal level. I call this the 'ABCDE' benefit. This type of walking also helps dyslexic children to improve concentration and motor co-ordination. These observations are based only on one's experience. Unfortunately, no scientific research has been done on 8-shaped walking to substantiate these statements". Siddha expert, Dr D. Velayudham also agrees that ancient *Siddhas* recognised the importance of 8-shaped walking. "The twists and turns in 8-shaped walking has health benefits to people of all age groups", he says. In the Western countries, it is known as 'infinity walking'.

### **How to Practise 8-Shaped Walking**

8-shaped walking can be practised anywhere. It can be practised in the house itself where proper ventilation is available. A space of 10 feet by 8 feet is required. Two chairs or two objects can be placed 5 feet apart, in a north-south direction. The walker starts walking from a southerly direction towards the north, beginning in the middle, between the 2 chairs and walking around the chairs in a figure-8 pattern.



A 20-30 minutes' walk at a comfortable pace provides optimum results. For a 30-minute walk, the direction of the walk should be changed after 15 minutes. For example, if one starts the walk in a south-north direction, then after 15 minutes, one should reverse the direction to a north-south direction. It is advisable not to be distracted as engaging in a personal or mobile conversation, during the walk. Siddha

doctors recommend listening to soothing music or chanting of divine *mantras* for positive energy. Pregnant ladies and Cancer patients should avoid this type of walking.

According to various studies, regular walking provides 34 benefits to the human beings. Siddha experts say that 8-shaped walking gives four times more benefits than regular walking.

So, let us stay grounded and keep walking – in regular, retro and 8-shaped patterns, for wholesome health. Obviously, Charles Dickens, the great English author too knew what he was talking about when he said, "The sum of the whole is this: Walk and be happy; walk and be healthy. The best way to lengthen our days is to walk steadily and with a purpose".

*(Disclaimer: The content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. It is only to create awareness about 'walking'. Readers are advised to seek the*

*advice of their physician or any other qualified health provider, based on medical condition.)*

***By K Srinivasan, Publisher & Managing Editor, and  
Susan Koshy, Editor-in-Chief***

***Source : November 2017 issue of PreSense***

\*\*\*\*\*

# Rabies, a 100% Fatal Disease That Is 100% Preventable

## RABIES: THE FACTS

### VIRUS TRANSMISSION

Saliva of infected animals **99%** of human cases are caused by **dog bites**

The virus attacks the brain  
Rabies is **fatal** once symptoms appear

### FATALITIES

Rabies affects **poor rural communities** mostly in Asia and Africa

Distribution of risk levels for humans contacting rabies

About **One death** every **15 mins**

**40%** of the victims are younger than 15

### TREATMENT

**Thorough washing** of the wound with soap, and, vaccine injections can avoid symptoms and **save lives**

### HOW TO PREVENT RABIES TRANSMISSION FROM DOGS?

Learn **dog body language**  
**NO BITE = NO RABIES**

Raise public **awareness**

### VACCINATING DOGS SAVES HUMAN LIVES

Rabies is **100% preventable**

Vaccinating **70%** of dogs **breaks rabies transmission cycle** in an area at risk

Every dog owner is concerned

**Global elimination of dog-mediated human rabies**  
The Time is Now! # rabies

Rabies is a zoonotic disease (a disease that is transmitted from animals to humans), caused by the rabies virus. With the exception of Antarctica, rabies is endemic in all continents. Official reports from the World Health Organisation (WHO) put the global estimate of rabies deaths at 55,000 and India accounts for 36% of the deaths (about 20,000).

This figure from India is also feared to be under-reported as many of the deaths are not declared as caused by rabies. This is a grave picture for India.

99% of the human rabid deaths are from dog bites. 40% of these deaths are children below 14 years of age. This is because children are weak to resist the attack due to their short stature, and also because of their curiosity with the animals, and their ignorance about the threatening consequences of bites. They therefore, do not report them to elders.

Only mammals can get rabies. Birds, fish, reptiles and amphibians do not carry or get rabies. Among the mammals, the most common carriers of rabies among the wild are bats, foxes, racoons, coyotes and skunks.

Among the domesticated animals, dogs, cats and some farm animals like the cattle are the common carriers of rabies. In India, domestic dogs are reported as the most common reservoir of the virus, with more than 95% of human deaths caused by dog-mediated rabies.

### **Infection, Symptoms and Diagnosis**

The virus is transmitted in the saliva of rabid animals and generally enters the body in the virus-laden saliva from a rabid animal into a wound such as a bite or a scratch or by direct exposure of the mucosal surface (lining of a body opening like the nose, mouth, etc) to the saliva from an infected animal (during licking). The virus cannot infiltrate intact skin.

The incubation period for rabies is normally 2-8 weeks but can go up to a few years, depending on factors such as the location of virus entry and viral load (concentration of the virus). The initial symptoms of rabies include fever with pain and unusual or unexplained tingling, pricking, or burning sensation (paraesthesia) at the wound site.

Once the virus reaches the brain, it further replicates, resulting in the manifestation of clinical signs in the patient. As the virus

spreads to the central nervous system, progressive and fatal inflammation of the brain and spinal cord develops and death is certain within 10-14 days.

There are two forms of the disease:

- *Furious rabies* exhibits signs of hyperactivity, excitable behaviour, hydrophobia (fear of water) and sometimes aerophobia (fear of fresh air). Death occurs in a few days due to cardio-respiratory arrest.
- *Paralytic rabies* accounts for about 30% of the total number of human cases. This form of rabies runs a less dramatic and usually longer course than the furious form. Muscles gradually become paralysed, starting at the site of the bite or scratch. A coma develops, and eventually death occurs. The paralytic form of rabies is often misdiagnosed as a neurological infection as encephalitis or meningitis, contributing to under-reporting of the disease.

Unfortunately, the current diagnostic tools available are not equipped for detecting the rabies infection before the onset of the clinical disease and the rabies-specific symptoms of hydrophobia or aerophobia are presented.

By then, it would be too late to treat the disease as it has then become 100% fatal. But the silver lining in this morbid series of bad news is that this dreaded disease is 100% preventable.

## **Treatment**

The World Health Organisation (WHO) has classified 'animal contact' into three categories and recommended the corresponding Post Exposure (bite) Prophylaxis (treatment) or PEP for the treatment.

<b><u>Category</u></b>	<b><u>PEP</u></b>
I – touching or feeding animals; licks on intact skin.	None.
II – nibbling of uncovered skin; minor scratches or abrasions without bleeding.	Immediate vaccination and local treatment of the wound.
III – single or multiple transdermal bites or scratches, licks on broken skin; contamination of mucous membrane with saliva from licks; contacts with bats.	Immediate vaccination <b>and</b> administration of rabies immunoglobulin. Local treatment of wound.

All category II and III exposures are assessed as carrying the risk of developing rabies and requiring PEP. This risk is increased if:

- the biting mammal is a known rabies reservoir or vector species.
- the exposure occurs in a geographical area where rabies is still prevalent.
- the animal looks sick or displays abnormal behaviour.
- a wound or mucous membrane was contaminated by the saliva from the animal.
- the bite was unprovoked.
- the animal has not been vaccinated.

## **Prevention**

September 28 is annually observed as World Rabies Day, and the Association of Prevention & Control of Rabies in India (APCRI) is actively involved in creating awareness about rabies through health education propaganda of its prevention, treatment and vaccination.

And finally, the following tips are useful in preventing rabies and keeping the threat at bay:

- Vaccinate all dogs and cats against rabies regularly as specified by law.
- Keep the pet dogs under control from the risk of stray and wild animals.
- Leave stray and wild animals alone.
- Do not keep wild animals as pets.
- Keep your property clear of wild animals.
- Do not touch, feed or adopt wild or stray animals.

***By Susan Koshy, Editor in Chief***

with input from Dr J Balasubramanian, Retired Professor of Paediatrics, Government Medical Service, Tamil Nadu, and Life Member of Association for Prevention and Control of Rabies in India (APCRI). He is actively involved with various organisations interested in prevention of rabies.

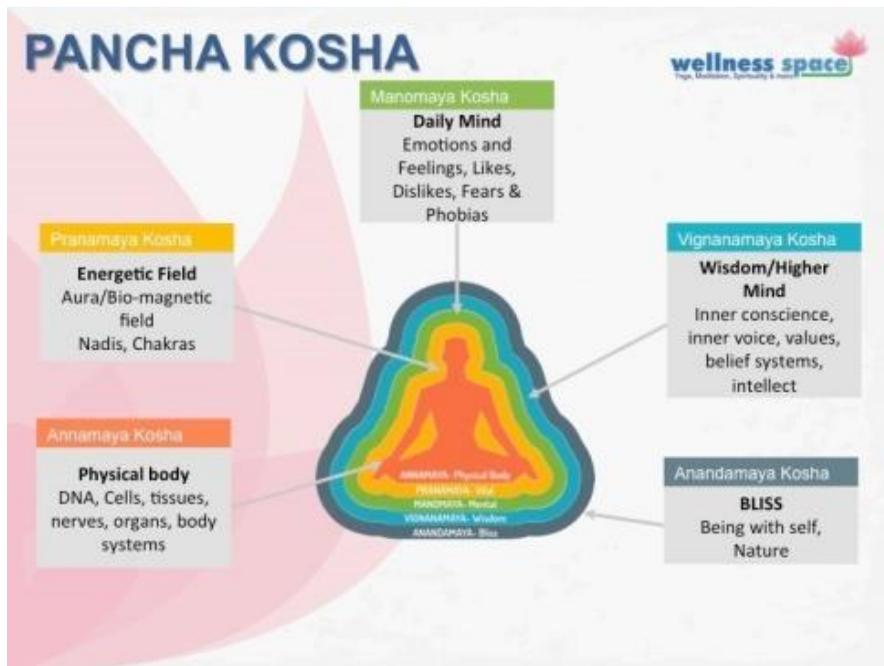
***Source: Feb 2018 issue of PreSense***

\*\*\*\*\*

## Pranayama Helps Reduce Stress and Improves Health

On 21<sup>st</sup> June 2019, the whole world celebrated 5<sup>th</sup> International Yoga Day. Yoga is the greatest gift given to the world by India thousands of years ago. Nobody is able to find out the origin of Yoga techniques, as it goes as far back as the Vedas, where it is mentioned too. Lord Krishna in his Bhagwad Gita talks about 'Ashtanga Yoga'.

Pranayama is the advanced stage in Yoga Practice after Asana. According to Patanjali, compiler of Yoga Sutras in Sanskrit 5000 years ago, Pranayama is the retention of *prana*, a bioplasmic energy. Pranayama is the cessation of the movement of inhalation and exhalation of air through the nostrils. Patanjali wrote 196 Yoga Sutras covering *Ashtanga* (8 steps) *Yoga* like *Yama*, *Niyama*, *Asana*, *Pranayama*, *Prathyahara*, *Dharana*, *Dhayana* and *Samadhi*.



Around the same time, Thirumoolar wrote 3000 hymns in Tamil elaborating the same *Ashtanga Yoga*. According to Thirumoolar, any person practising 'Kumbaka' (retention of breath) can increase the longevity of healthy life. Lord Krishna in Bhagwad Gita talks about the importance of Pranayama (Sloka 4.29).

### **Pranayama – Definition**

Yoga experts give two types of definitions. Prana means life energy. Prana + Yama = control of breath (Inhalation of breath – Purak, holding of breath – Kumbak, and exhalation of breath – Rechak) – to improve physical and mental health.

Prana + ayama = Dimensions of breath (breathing with awareness and passing it through Nadis in human body to activate chakras) to experience a spiritual journey.

### **Concept of the Human Body**

Modern Science divides the human body into various systems like respiratory system, urinary system, circulatory system, nerve system, etc. Each system is divided into organs, tissues, cells. When there is a problem, modern medicine starts diagnosing the respective system to cells.

According to Yogis, the human body has 5 sheaths (layers) viz. Annamaya Kosha (Food Sheath), Pranamaya Kosha (Vital Sheath), Manonmaya Kosha (Mental Sheath), Vijnanamaya Kosha (Intellectual Sheath), and Anandamaya Kosha (Bliss Sheath). Through Pranayama, these layers are activated to increase the inner potential of the person, which remains dormant always.

According to modern science, the lungs of an average human being has the capacity to hold 5 litres of air. But in practice, people not practising breathing exercises use less than 8% (less than 400 ml). People who practise breathing techniques like Pranayama, swimming, etc can go upto 30% (1500 ml). Holding the breath will help to increase the oxygen absorption by the body, which maintains good health of the body cells.

### **Some Benefits of Pranayama**

- Improves blood circulation and cardiac vascular function.
- Increases red blood cells.
- Increases lung capacity providing solution for respiratory disorder
- Stimulates various enzymes needed for digestion
- Reduces stress level and keeps blood pressure normal
- Controls Type 2 Diabetes
- Acts as bridge/connector between body and mind.

An average person breathes 15 to 18 times per minute. Reducing the breaths per minute improves the longevity of life and health. Through Pranayama, the breath rate can be reduced.

### **Simple Exercise**

Readers can adopt the following basic steps and experience Pranayama.

Take a brisk walk for 10 minutes  
Sit with spine erect, in a comfortable posture on a mat (either on the floor or on a chair) in a ventilated place. Keep your hands in Chin Mudra (touch the tip of thumb with tip of the index finger with palms facing upward as in the picture).



- Keep your eyes closed
- Observe the flow of breath for one minute – Observe the movement of abdomen during inhalation and exhalation.
- Start with exhalation (both nostrils) for 3 seconds
- Inhale for 3 seconds through both nostrils
- Exhale for 3 seconds through both nostrils.
- Continue this practice for 5 minutes for a week and increase to 10 minutes in the next week. You can slowly increase upto 20 minutes.

While coming out of your practice, do not open your eyes suddenly. Rub your palms and keep them on your eyes, without touching the eye balls, for 10 seconds. Then slowly open your eyes.

Once you are comfortable with this exercise, increase the count from 3 seconds to 5 seconds. After achieving the '5-second inhale and 5-second exhale' for 20 minutes comfortably, go to a competent Yoga teacher for the advanced level of Pranayama. If you have any chronic health problems, consult your doctor before starting your practice of Pranayama.

***by K Srinivasan, Publisher and Managing Editor,  
(With input from Yoga Shikshak Shri Suresh Veera)  
Source : June 2019 issue of PreSense***

\*\*\*\*\*

## **We Are What We Eat – How Food Affects Our Actions and Behaviour**

In the recent years, due to changes in the life style and food habits of our people, especially the youth, the society is facing major health issues. Those health issues which used to affect people after the age of 55 years, are affecting even youngsters in their twenties these days.

In this regard, what modern science explores in research today was explained in detail by Lord Krishna in the Bhagawad Gita (Chapter 17, Slokas 2 to 10) over 5000 years ago. The food we consume affects not just our health but also our behaviour and responses too.

In the Bhagawad Gita, Lord Krishna defines three types of food *viz. Sattvic* (mode of goodness), *Rajasic* (mode of passion) and *Tamasic* (mode of ignorance). These three types of food influence the mood of the person differently.

### **Sattvic Food**

Bhagwad Gita Sloka 17.8:

**आयुःसत्वबलारोग्यसुखप्रीतिविवर्धनाः ।**

**रस्याः स्निग्धाः स्थिराहृद्याआहाराः सात्विकप्रियाः ॥ ८ ॥**

(Meaning: *Persons in the mode of goodness prefer foods that promote the life span, and increase virtue, resilience, health, happiness and contentment. Such foods are juicy, succulent, nourishing, and naturally tasteful*).

Naturally available fruits, nuts, vegetables, pulses, cereals, grains like rice/wheat, green tea (fresh leaves), natural juices, Idly, plain *roti* and fish are *Sattvic* foods. This type of food is suitable for those who work using their brains, *viz.* intellectuals like IT professionals, teachers, researchers, scientists, and so on.

The word *Sattvic* is derived from the Sanskrit word *Sattva* which means pure, essence, nature, vital, energetic, clean, conscious,

strong, courage, true, honest, wise, rudiment of life. *Sattvic* diet emphasises food and eating habits which promote, maintain or restore a *sattvic* style of living.

### **Rajasic Food**

Bhagwad Gita Sloka 17.9:

कट्वम्ललवणात्युष्णतीक्ष्णरूक्षविदाहिनः ।  
आहाराराजसस्येष्टादुःखशोकामयप्रदाः ॥ ९ ॥

(Meaning: *Foods that are too bitter, too sour, salty, very hot, pungent, dry, and spicy are dear to those persons in the mode of passion. Such foods produce pain, grief, and disease.*)

*Rajasic* food is consumed for good taste. Vegetables consumed as spicy food, fast food, masala-added foods, Dosa, stuffed chapattis, soups, non-vegetarian items like red meat, egg, black tea and coffee come under this category. This type of foods increases muscle strength. *Rajasic* food is suitable for people engaged in outdoor sports and games, the army, police professionals and those who use physical strength in their work.

### **Tamasic food**

Bhagwad Gita Sloka 17.10:

यातयामंगतरसंपूतिपर्युषितंचयत् ।  
उच्छिष्टमपिचामेधंभोजनंतामसप्रियम् ॥ १० ॥

(Meaning: *Foods that are overcooked, stale, putrid, polluted, and impure are dear to those persons in the mode of ignorance.*)

*Rajasic* foods are those that are consumed after 6 hours of cooking, as well as reheated food, beverages like cold coffee, artificial juices, junk food, cakes and biscuits. This type of foods reduces the coordination of the mind with the body. Such food should be avoided in order to maintain good health and a sound mind.

### **What Human Beings Need**

(Image Courtesy: [www.heymonicab.com](http://www.heymonicab.com))

pure, light, sweet positive energy flow	spicy, over-stimulating, creates restless, excited mind	dull, heavy, blocks flow of prana, creates toxins
<b>sattva</b>	<b>rajas</b>	<b>tamas</b>
Foods that promotes purity of mind, peace, intelligence and right decisions	Foods that give us motivation. Food that keeps us attached to the ego and creates desires.	Foods that destroy our resistance to disease. Clouds the mind. Promotes negative emotions.
MILK	COFFEE/ BLACK TEA	RED MEAT
HERBAL TEA	CHICKEN	ALCOHOL
GHEE	EGGS	FAST FOOD
GRAINS	ONION/GARLIC	FRIED FOOD
FRESH SWEET FRUITS	DARK LENTILS	FROZEN FOOD
FRESH VEGGIES	CITRUS FRUITS	CANNED/STALE FOOD
HONEY	VERY SPICY FOODS	REFINED SUGARS
NUTS	CHOCOLATE	TOBACCO
MUNG BEANS	SALT	SODA
*PEACE WHILE EATING	*EATING TOO FAST	*OVEREATING

Human beings require a diet that is a combination of *Sattvic* and *Rajasic* foods in a balanced proportion. The proportion depends on the nature of the job the person undertakes. It is similar to adorning jewellery crafted with a balanced blend of pure gold and copper. For example, a person engaged in a job where he uses intelligence like the IT industry, research, teaching, etc., should have a diet consisting 80% *Sattvic* food and 20% *Rajasic* food. Scientists should have a diet of around 90% *Sattvic* food to achieve excellence.

People like Dr Abdul Kalam, Albert Einstein and Bernard Shaw used to have a diet that contained more than 90% *Sattvic* food and they have achieved excellence in their respective areas of work. It is reported that Adolf Hitler had a diet that was more than 90% *Sattvic* food.

People working in the police, the army and those working towards great physical strength require about 60% *Sattvic* and 40% *Rajasic* food. Ancient kings used to have a diet of this proportion to maintain their valour.

It is suggested that to maintain a balanced mind and body, a minimum of 50% of one's diet should be *Sattvic* food. If the intake of *Rajasic* food increases (more than 60% of the diet), it could negatively affect one's mental balance. They may become very emotional. It is believed that if a majority of people in a society consumes a diet that is predominantly *Rajasic*, it could affect their emotional balance, threatening a law and order issue in that society.

Youngsters of upto about 25 years of age are generally more engaged in physical activities. These youngsters therefore need high nutrition. *Sattvic* food is highly nutritional. If they consume more of *Sattvic* food, such a diet will help them over the following 50 years of their lives to maintain good energy levels, strength (stamina) and intelligence.

*Tamasic* food is to be generally taken only for medicinal purposes under the guidance of doctors. When the portion of *Tamasic* food is increased, drowsiness occurs, adversely affecting the coordination of the motor senses with the brain. For example, when a person consumes excessive alcohol, he loses his balance and the quality of work suffers.

pH level is a measurement of the acidic/alkaline ratio in the body. The ideal pH ratio is 80% of alkaline and 20% of acid, which ensures good health. *Sattvic* food is more than 80% alkaline which protects the immune system and makes it stronger. The recovery rate of patients taking *Sattvic* food is faster than that of people who consume *Rajasic* and *Tamasic* food. People suffering from hypertension and constipation can improve their condition by including more *Sattvic* food in their food habit.

## **Interesting Facts about Animals**

Interestingly, this kind of food habit is applicable even to animals. Herbivorous animals (animals that eat herbs) have a long digestive system like human beings. Animals like the cow, goat, elephant, sheep, buffalo and horse eat only vegetarian food. They live without attacking other animals and human beings and are helpful in preservation of the environment. They belong to the *Sattvic* category of food consumers.



Human beings fall under the herbivorous category due to the anatomy of their body. However, human beings consume all three types of food, viz. *Sattvic*, *Rajasic* and *Tamasic*.

Animals like the cheetah, the lion, the tiger and certain breed of dogs (known as the carnivorous category) eat the flesh of 'herbivorous' animals. These animals have a very short digestive system, so that the digested particles get eliminated from the digestive system quickly. These animals are aggressive in nature.

Carnivorous animals have short bowels to allow minimal transit time for the unstable and dead animal food which putrefies and decays fast. On the contrary, humans have longer digestive tracts for the slow digestion and better absorption of plant food. The stomach of carnivores is more acidic than that of human beings, and this enables them to digest raw meat. Animals like the fox, and birds like the crow and the vulture (omnivorous category) eat dead animals and leftover foods. They are not aggressive, but they attack from behind.

## Conclusion

The nation has to develop not only economically. It needs to promote healthy people. Progress in technology and advanced life style have changed our food habits but not for the better. We should therefore be conscious about what we consume and develop

healthy eating habits because our behaviour, attitude and thinking are affected by the kind of food we eat. Healthy people make a healthy society and a healthy nation.

***by K Srinivasan, Publisher and Managing Editor  
(Information input: courtesy Shri Suresh Veera, Yoga Expert)***

***Source : Aug 2019 issue of PreSense***

\*\*\*\*\*

## Ancient Indian Pranayama Validated by Nobel Laureates



Dr A V Srinivasan (AVS)

Recently, the Team of PreSense met up with Dr A V Srinivasan, (popularly known as Dr AVS), an internationally renowned neurologist from Chennai. He holds the honorary position of Emeritus Professor for Life of the Tamil Nadu Dr MGR Medical University. Dr Srinivasan retired from the Madras Medical College, Chennai where he was the Head and Professor of Neurology in the Institute of Neurology. Dr Srinivasan won fellowships awarded by the American Academy of Neurology, and the Royal College of Physicians. He is the first Indian

to receive the American Indian Neurology Award in USA for the best paper presentation during the annual meeting of the American Academy of Neurology. He has also served as the President of Indian Academy of Neurology.

In an exclusive interview with K Srinivasan, Publisher & Managing Editor, and Susan Koshy, Editor in Chief, Dr A V Srinivasan spoke about the impact of Pranayama on our brain and its functioning.

*Excerpts:*

***Q. The recent Nobel Prize 2019 for Physiology and Medicine was awarded to three scientists for their discoveries of how cells sense and adapt to oxygen availability. How can we relate this recent discovery to the ancient Indian yogic practice, Pranayama? How is it validated?***

**Dr AVS:** If you look at the functions of the brain, to explain in computer terminology, there are six hardware components in the brain. The first hardware component which constitutes the programmer is the Basil Ganglia. It programs the movement impulse and gives it to the Central Processing Unit (CPU), Cerebellum, which calculates and perfects it and feeds it to the

keyboard called Cerebral Cortex. This is related to the motor movement and hence is called the spinal motor system.

The next is the sensory system which sends the sensation from the periphery into the brain and makes the motor system more efficient. At the time of flight or fight, nature has given a wonderful system called the Autonomic Nervous System (ANS), which consists of Parasympathetic and Sympathetic Nervous Systems. It acts in important functions like sight, respiration, bowel movement, etc. The last system is the lymphatic system, which integrates the motor, sensory and autonomic systems. All these systems converge in this area, and makes a man a gentleman and a woman, a lady.

If you want all these six neural systems to operate efficiently, you need energy. 20% of the energy produced by the body is taken up by the brain for its maximal efficiency. The oxygen is taken from the blood tissues by combining with the haemoglobin, and then released in the cell tissues. Thus, by utilising the oxygen supplied, all the intracellular organisms in the neurons act in unison. They send the input called electromagnetic or electrical impulses to all the other functionaries. They all depend on oxygen for functioning efficiently.

Oxygen is produced by oxygenation in the lungs. When you inhale, the lungs purify the air, take up oxygen from it and carry it to the different tissues of the body. When you are tensed or anxiety-ridden, your heart rate goes up. Nearly 60-70% of the available oxygen is consumed during this state, thus wasting valuable oxygen. It is believed from ancient times that if you are able to control your breathing mechanism and are able to bring down the breathing rate from 10-12 cycles per minute to preferably 6 cycles per minute, then maximum energy is stored in the tissues and is available for release at the time of necessity. This is through *Pranayama*. Hence, it was strongly believed that when you practise *Pranayama*, you will be able to control your respiratory rate per minute and improve the functioning of your cells.

The Nobel Laureates have explained the peripheral mechanism of how the oxygen is utilised and sent to different areas of the body.

*Pranayama* gives the mechanism by which this oxygen is produced in the tissues and the blood is oxygenated in the lungs by purification of the impure blood. Therefore, instead of controlling it at the cellular end, if you control it at the beginning of the process by oxygenation of the blood, it produces efficiency.

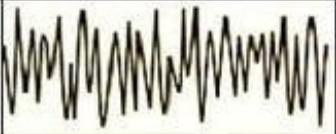
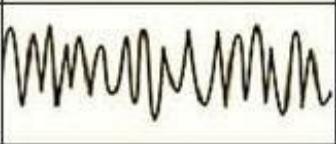
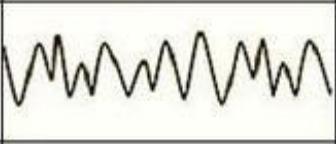
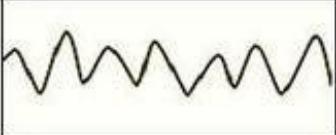
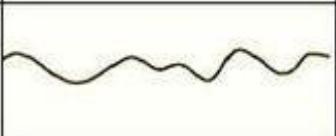
***Q. What is the right method of practising Pranayama?***

**Dr AVS:** Our ancient practitioners concentrated on the perfection of *Pranayama* which is inhalation, retention and exhalation. It is said that 1:2:4 (inhalation-retention-exhalation) rhythm of respiration which comes to 7 times per minute, is the ideal rhythm. The more experienced practise 2:4:2 which is difficult. They begin by practising inhalation-exhalation at 4 sec-4 sec rhythm. Some practitioners believe that if we inhale through the left nostril and exhale through the right nostril, it helps reduce weight. If you inhale through the right nostril and exhale through the left nostril, you are likely to put on weight. But the basic mechanism remains the same. *Pranayama* should be done slowly so that you are not breathless by the end of the exercise.

Our ancient people believed that prevention is better than cure, and hence the word *Ayur Veda* or the Method of Living. In this method of living, the first step is *Pranayama* through which oxygen is taken into the blood. This year's Nobel Laureates have discovered about oxygen in cellular mechanism. As usual our Western scientific precepts confirmed our ancient instincts. Thus, we are able to give a scientific explanation for the practices from ancient times. Both of them – the ancient practitioners of *Pranayama* and this year's Nobel Laureates – deserve applause.

***Q. How does practising Pranayama impact the brain and its efficiency?***

**Dr AVS:** It is said that through *Pranayama*, one is able to still the mind. Once you still the mind, it can see beyond thought. In the realm of thought, you can invent. In the realm that is beyond thought, you can create. *Pranayama* has an effect on the meditative techniques.

<p><b>Gamma: 30-100+Hz</b> Peak performance, flow</p>	
<p><b>Beta: 12-30Hz</b> Awake, normal alert consciousness</p>	
<p><b>Alpha: 8-12Hz</b> Relaxed, calm, lucid, not thinking</p>	
<p><b>Theta: 4-7Hz</b> Deep relaxation and meditation, mental imagery</p>	
<p><b>Delta: .1-4Hz</b> Deep, dreamless sleep</p>	

Normally, alpha frequency waves are detected in the back of the brain called the Occipital Lobe. The theta activity is detected in the Temporal Lobe. In the Frontal Lobe, you find fast activity (more than 13 cycles per second). In *Pranayama*, the trains of alpha activity increase and reach the theta level. It further progresses into the delta activity.

Normally, when one progresses from alpha to theta stage, one feels drowsy, and in the delta stage, they are in deep sleep. But if you have mastered the meditation technique and the art of the *Pranayama* exercise, even in the less than 4.0 cycles per second frequency, one can still be fully conscious. Normally, in the stage of 1.5-2.5 cycles per second frequency of brain activity, one is conscious but capable of controlling the entire autonomic nervous system in normal life. In *Pranayama*, one is able to master the autonomic nervous system. He is able to consciously raise or lower his heart rate and his body temperature. Our ancient people were able to master this technique. The last group of people who were

able to demonstrate this capability were the Lamas (Buddhist monks). They were able to dry the iced sheets placed on their bodies. The time taken to dry the iced blanket is called the *Tummo Effect*. The next step is what we call the *Samadhi* state. We have not seen it in our present era. It is believed that by mastering through *Pranayama* and meditation, people can get into this state where they can stop the respiration, the heart beat and be in the assumed state of being dead. But they can come back to life at their will. This has been demonstrated in the ancient times.

If the breathing pattern and meditation is combined beautifully, we can validate the scientific credibility of the function of the brain. A simple mastery of our breathing and meditation can give us control of our autonomic nervous system. That is the day when man can enjoy life with love as the basis and truth and faith as accompaniments.

***by K.Srinivasan, Publisher & Managing Editor, with Susan Koshy, Editor-in-Chief***

***Soutce: October 2019 issue of PreSense***

**\*\*\*\*\***

## The Importance of Emotional Quotient (EQ) in Life

***I don't want to be at the mercy of my emotions.  
I want to use them, to enjoy them, and to dominate them.  
– Oscar Wilde (Poet)***



In the present-day lifestyle that is constantly in the top-gear mode, most of the people are living their lives, coping with the ever-changing demands of life. The expectations in the “dog-eat-dog” environment at work or the demands of the “social status and social media influenced” relationships at home and within the social circles are intense.

A famous quote says, “*Education is the passport to the future, for tomorrow belongs to those who prepare for it today*”. And one knows how profound this truth is.

Parents especially Indian parents with the good intention to prepare their children for these demands, are consciously or unconsciously, pressuring their children to perform well in their studies, expecting them to be among the top performers. They

seem to believe that only then would their child be able to cope with life successfully as achievers.

Students themselves, in the pursuit to stay on top academically in order to get the best deal in their future life, are stressing themselves out. Their success is thus measured by the percentage, percentile and grades they score in the examinations that test their intelligence and knowledge, or in other words, their Intelligence Quotient (IQ). Intelligence Quotient (IQ) is a measure to gauge how well one can use one's knowledge and information and logic to answer questions and solve puzzles.

In many cases, these children turn out to be high performers in school and are able to get into top-notch institutions for their tertiary studies. At this point, they leave the cocooned safety and comfort of their homestead to venture outstation to study and compete with the other top performers from other schools.

That might be when the pressure to perform begins to stress them out. Having established a reasonably high benchmark of performance for themselves at the school level, they are under



pressure to sustain the standard for themselves. This is where one's emotional stability plays a key role in dealing with the academic challenge. This is when the student must understand that life, even for a student, is more than the scorecard. This is the time when the student, in case of a crisis, must know that there are ways and means and people to turn to for help. At this moment of despair, the student must be confident that the family is there to turn to for help, comfort, solace and respite – not drugs, sleeping pills, emotional breakdown or even suicide.....In India, every hour, a student is committing suicide.

Somewhere along the way, as the focus is on the IQ of the student, the more important behavioural factor, Emotional Quotient (EQ) is ignored. Emotional Intelligence or Emotional Quotient (EQ) is the ability to understand, use, and manage one's emotions in a positive way to relieve stress, communicate effectively, empathise with others, overcome challenges and defuse conflict. EQ is the ability to deal with life situations and challenges with the maturity that it demands.

The parents, the family and the home have a major role to play in curbing this serious and adverse suicidal tendency among some highly stressed out students. It is the responsibility of the family and the parents in particular, to teach the child not just about the importance to achieve academic excellence, but also help in developing the capability to cope with the accompanying challenges that life will surely dole out.

Parents must share the moral responsibility if their child fails to turn to them in times of need. They need to believe and also make their child believe and understand that failure is not the end but mere stepping stones to learn and reinforce oneself to compete better.

The child needs to be taught from an early age about true self-worth and to never let go of it. The parents, the family, the home, the school and its teachers and the society have to emphasise this.

While IQ is important, EQ is crucial for the well-being. Every parent who aspires for their child, must remember and work towards an

optimum blend of IQ and EQ to cope well with life and its innumerable challenges.

***by Susan Koshy, Editor-in-Chief***

***Source: November 2019 issue of PreSense***

\*\*\*\*\*

## Healthy Lifestyle Helps Reduce the Risk of Dementia



In India, more than 5 million people live with some form of dementia (degenerative loss of memory). Globally, 50 million people suffer from dementia. A new case of dementia is diagnosed every third second. At the Rajiv Gandhi Government General Hospital, Chennai, we get 600 new patients every year.

Dementia is an overall term for a medical condition characterised by a decline in memory, language and problem-solving and other thinking skills that affect a person's ability to perform everyday activities. Memory loss is an example. Alzheimer's is the most common cause of dementia.

The numbers tell that dementia has become a public health priority. Patients with dementia need carers, who should be sensitised about the patient's behavioural changes and memory loss.

It is becoming a burden to deal with the geriatric population in countries like China and Japan. Although India is on a slightly younger stage, we have to start tackling the elderly population living with dementia when they have minimal cognitive impairment (MCI). Though there is no cure for the disease, in MCI stage, you have a chance to postpone the disease. Whatever correctable factors like vitamin B12, B1 deficiency, early stages of thyroid that are contributing to irreversible dementia can be looked into and cured.

Difficulty in choosing appropriate words while speaking, language or spelling difficulty, visual-spatial difficulties like not knowing which direction to take, difficulty in handling cash, forgetting to receive cash from the shop after shopping, difficulty to come back home, having difficulty in recognising relatives and friends or misplacing things are very early symptoms of dementia. This is when we should start evaluating them in a structured manner by using cognitive impairment scale and quantifying them. Correctable nutritional deficiency, stopping habits like drinking and smoking, correcting thyroid malfunction, treating cholesterol, sugar and blood pressure levels and postponing atherosclerosis can prevent dementia in the early stages. However, a genetic locus which predisposes one for the development of Alzheimer's cannot be modified. So, if one knows that they have factors causing dementia that cannot be corrected, they can postpone or prevent it by following five steps.

In my opinion, the foremost damage is done by anxiety that is triggered by environment and social media. When a person is prone to anxiety, gets a cue, he goes into a catastrophic thought process that even amounts to fear to death. Secondly, the lack of interaction with family and relatives worsens the disease. The carer and dear ones should engage in a conversation with the patient. Talking about experience and memories activates neural networks in the brain and process information. A chat about what is happening in the world can feel like a breath of fresh air for the patient.



Next are the diet and physical activity. Westernisation of diet, junk and stored food are bad for people with dementia. Our traditional diet is time-tested and provides patients with nutrients. It has appetisers and probiotics in the form of curd. Having a balanced and healthy diet along with physical activities

like walking can ease some of the symptoms.

Finally, activate the neural circuits instead of just putting information in the brain. Exercise the circuits by doing sudoku puzzle, crosswords, etc. Do not take the same route daily. Try a different one. Start doing novel, innovative things in life daily. Just storing information is different from doing cognitive exercise!

There is a conception that only the geriatric population gets dementia. These days, due to faulty habits, the age for the onset of dementia has become earlier. Frontotemporal dementia is one such form of genetic dementia that occurs in early stages with mood and behavioural changes. Although Alzheimer's one of the causes, there are several other causes like repeated head injuries, tumours and multiple strokes.

**– As told by Professor Dr R Lakshmi Narasimhan, Director, Institute of Neurology, Madras Medical College**

***Source: November 2019 of PreSense***

\*\*\*\*\*

## The Mind Controls our Brain Which Controls our Health

eMagazine PreSense with Shreyans Foundation jointly organised an interactive session with Dr A V Srinivasan, internationally renowned neurologist, on December 15<sup>th</sup> 2019 at Chennai. Dr Srinivasan gave an introductory explanation about the mind and the brain and elaborated on the parts and functions of the brain. He concluded with suggestions on how to safeguard our neurological health from the common ailments prevalent in today's world.



We bring you some of the salient points from Dr Srinivasan's talk:

The human brain is controlled by the mind. The brain is just an antenna. Therefore, we need to keep our mind healthy in order to keep our brain healthy. Think good and do good and the brain will be healthy.

The three functions of the human brain are



1) Cognition (perception plus thinking) which is the higher mental function. We have spatial (space) and temporal (time) sequence of thought. Spatial sequence is explained by science. Temporal sequence of thought cannot yet be explained with the present knowledge of science because of the speed of thought (50 milliseconds). Science is able to analyse upto only one second so far.

2)

2) Conation (movement – of the eye, thought, hands and legs, etc). Every movement is caught by the neurons of the brain.

3) Affect (motor expression of emotion, clearly shown in the eyes and face).

For a healthy brain function, we need to follow healthy habits, viz.

- Go to bed by 10.30 pm and get up by 5.30am. We need at least 6 hours of sleep during this time as the brain prepares the body for the following day. This period of night is when neurotransmitters are produced. Besides, this sleep helps remove our physical and mental fatigue. Mental fatigue is removed during Rapid Eye Movement (REM) sleep and physical fatigue is removed during Non-Rapid Eye Movement Sleep (NREM). With insufficient REM sleep, we could wake up feeling physically alert but mentally dull, and with insufficient NREM sleep, we could be mentally alert but physically tired. Bad proteins are also removed by the brain during this sleep.
- Alcohol is not advisable in the Indian conditions. Avoid tobacco in any form.
- Do not go to bed on a heavy stomach.
- Do not cover your face while sleeping.
- Have at least 8 tumblers of water per day to avoid headaches.
- The ideal weight in kilograms is height in inches plus 10 for a male/ plus 5 for a female).
- Half of height in inches should be the ideal circumference of the waist. In case of a larger circumference, we suffer from central obesity syndrome.
- Avoid ABCD to be healthy: A – Alcohol, B – Beeda, C – Cigarette, D – Drugs.

The audio recording of Dr A V Srinivasan's introductory session is available in the following link:

<https://www.youtube.com/watch?v=p4WRN2BMHbM>.

**Source: Dec 2019 issue of PreSense**

\*\*\*\*\*

## Coronavirus First Discovered by School Dropout Virologist, Dr June Almeida 56 Years Ago

The novel Coronavirus which has overtaken the world in a pandemic attack in late 2019, was first identified by Dr June Almeida (born in 1930) while she worked in a hospital in UK with a researcher, Dr David Tyrell.

In 1964, one particular specimen of a virus, then known as B814, was sent to Dr Almeida for examination under her electron microscope. *(An electron microscope uses electrons to create an image of the target. It has much higher magnification or resolving power than a normal light microscope.)* She described the virus in the sample as resembling influenza viruses but not quite the same. She thus identified the first human Coronavirus.



**Dr June Almeida with her Electron Microscope. Inset: Image of Coronavirus as seen under her electron microscope in 1964. (Image Courtesy: [www.thescottishsun.co.uk](http://www.thescottishsun.co.uk))**

Unfortunately, her paper on her discovery, to a peer-reviewed journal was rejected as just "bad pictures of influenza virus particles".

Dr Almeida died in 2007, 57 years after her first discovery of the deadly virus, Dr Almeida is remembered and recognised for her pioneering work in understanding the virus.

**By Dr R Jagannathan, Editorial Advisor**  
**Source: April 2020 issue of PreSense**

\*\*\*\*\*

## **Laughter is the Greatest Medicine on Earth** *'Laugh until your belly hurts, and then a little bit more'*



Laughter is a non-verbal emotional expression. It is a physical reaction to certain external or internal stimuli. It is a social emotion that we also use to make social bonds.

Laughter can arise from such stimuli as tickles, or from humorous stories or thoughts. It is normally considered a visual expression of a positive emotional state such as joy, mirth, happiness, relief, etc. However, it may also be caused by emotional states such as embarrassment, apology, or confusion to display nervous laughter or courtesy laugh. The age, gender, education, language, and culture of a person can decide whether he will experience laughter in a given situation.

### **The Science of Laughter**

Interestingly, there is a science for the study of laughter and it is called gelotology ('Gelos' in Greek meaning 'laughter' and 'logy' meaning 'study'). Gelotology was established in the 1960s to study

the possible physiological and psychological effects of humour and laughter.

Laughter is a series of rhythmical, often audible contractions of the diaphragm and some other parts of the respiratory system. When we laugh, our facial expressions and pattern of breathing too change, and during a hearty laughter, the muscles of the arms, legs and trunk also move.

Two main chemical components in our body, viz endorphins and dopamine come into action during laughter. Endorphins, known as the natural happy hormones, are a group of peptide (protein) hormones which increase pain tolerance and also positively affect our emotions. Dopamine is a neurotransmitter and has a role in the central nervous system. When we laugh, endorphins are released from the pituitary gland into the blood and then into the brain and into the spine. During laughter, dopamine is released in the brain and then sent as a signal to the other nerves in the body. These hormones have a positive impact on the mood and emotions.

William F. Fry, Professor Emeritus at the Stanford University, USA and one of the pioneers in gelotology, after extensive research, advocates induction of laughter on therapeutic grounds, in alternative medicine. According to Fry, "Mirthful laughter has a scientifically demonstrable exercise impact on several body systems. Muscles are activated, heart rate is increased, respiration is simplified with increase in oxygen exchange – all similar to the desirable effects of athletic exercise." He also observed that the average kindergartener laughs 300 times a day while the average adult laughs only 17 times a day. Life gets serious as we get older and it is easy to forget to laugh. We need to remember to laugh for our mental and physical well-being.

People generally laugh in response to humour or when tickled. But could just learning to laugh for no reason (artificial laughter) yield the same health benefits as from natural laughter? According to Mora-Ripoll, a specialist in mind-body therapies like therapeutic humour and laughter, the brain cannot distinguish between laughter that is induced by humour, and laughter for its own sake,

viz. 'artificial laughter'. "The brain is not able to distinguish between these types," claims Mora-Ripoll. "Therefore, it is assumed that similar benefits may be achieved with one or the other."

## The Laughter Club



**Dr Madan Kataria (centre) with one of his Laughter Clubs**

Physician and family doctor, Dr Madan Kataria from Mumbai, India obviously believed in this philosophy that we can derive great physical, mental and social benefits from laughing for no reason. He was also inspired by the facial feedback hypothesis, which suggests that a person's facial expressions can have an effect on the emotions. Thus, in

1998, he founded the Laughter Day and the worldwide Laughter Yoga movement. Laughter Yoga combines yogic breathing techniques with unconditional laughter. Instead of humour to induce laughter, these sessions begin by using exercises that simulate the physical activity of laughter. The celebration of World Laughter Day is intended as a positive manifestation for world peace and to build global consciousness of brotherhood and friendship through laughter. It is celebrated with laughter by gatherings of people in public places. Today, there are thousands of Laughter Clubs in more than 105 countries.

## Laughter as Therapy

Norman Cousins was an American political journalist and world peace advocate, born in 1915. In the mid-1960s, when he was in

his late forties, Cousins was diagnosed with ankylosing spondylitis, a painful collagen illness that threatened to immobilise him. Only one in every five hundred people diagnosed with this condition, fully recovered. Cousins decided to combat this condition by first understanding the impact of his stressful lifestyle that led to his medical condition. He then set himself on 'reverse therapy' to repair his immune system. He took a course of vitamin C (ascorbic acid) tablets to help combat inflammation and repair his adrenal glands. In order to deal with the unbearable pain in his body, he watched some popular television comedy series of those times, viz. Marx Brothers and Candid Camera to humour himself to some hearty laughing sessions. He quickly discovered that just 10 minutes of induced hearty laughter gave him at least two hours of painless sleep. After several years of continuous laughter therapy and supplements of vitamin C, Cousins relieved himself of pain and the ailment, and lived up to 75 years of age, before dying of cardiac arrest.



**Norman Cousins**

## **What Happens to Your Body When You Laugh**

Here's What Happens to your body when you laugh:

- *You burn calories:* A study by the Vanderbilt University, USA revealed that laughing for just 15 minutes a day can burn up to 40 calories.
- *Your brain is charged:* Laughter can send a wave of electricity as stimulus through the entire cerebral cortex (responsible for higher thought processes).
- *You get a boost of endorphin:* Laughter triggers the release of endorphins, the body's natural feel-good chemicals. Endorphins promote an overall sense of well-being and can even temporarily relieve pain, as was observed in Norman Cousins' case.
- *You relax:* The relaxed feeling you get after a fit of laughter is similar to the one you get after a workout. This feeling can last for up to an hour.
- *Your immune system gets a boost:* Laughing increases the body's production of antibodies and T-cells (cells that protect

the body from pathogens and cancer cells) and helps boost the immune system and fight disease.

- *You increase your pain tolerance:* Experiments have shown that subjects, laughing and amused by comedies, tend to have a higher threshold to pain. The pain tolerance is also increased. This is attributed to the release of endorphins and dopamine in the body.
- *Your stress levels plummet:* Laughing helps in de-stressing. According to a research finding by the University of Waterloo Canada, people with a strong sense of humour are less depressed and anxious than those with a low sense of humour. Therefore, why stress out when you can laugh about it?
- *You reinforce relationships:* Laughter in a group helps form strong social bonds. The contagious nature of laughter can also heighten the level of endorphins being released, promoting feelings of togetherness and congeniality.
- *Your blood pressure plummets:* Laughter lowers blood pressure, and researchers have linked laughter to the healthy functioning of blood vessels, which can lower the risk of heart attack.
- *Your sense of humour improves:* Brain scans reveal that even hearing laughter triggers us to join in with laughter. Watch the following video for proof:

<https://www.youtube.com/watch?v=1veWbLpGa78>

Charlie Chaplin, British comic actor and filmmaker, better known worldwide as the greatest comedian on screen, making viewers laugh so hard to split sides, once said, "*A day without laughter is a day wasted.*" So, go ahead, and laugh your heart out! They say, "*Life is better when you are laughing.*"

**by Susan Koshy, Editor-in-Chief**

**Source: May 2020 issue of PreSense**

\*\*\*\*\*

## The Dark Side of Laughter



**The Joker**  
(Image Courtesy: mensxp.com)

Actor Joaquin Phoenix's Oscar Award-winning character, The Joker in the movie of the same name, had a distorted character and disturbed behaviour with his sudden and recurrent episodes of uncontrollable and inappropriately hysterical laughing in awkward situations. This condition of uncontrollable laughter is a medical condition called Pseudobulbar Affect (PBA), occurring due to a "disconnect in the brain – between the frontal lobe (which controls emotions) and the

cerebellum and brainstem (where reflexes are mediated)," according to the American Stroke Association.

Those who experience PBA do not necessarily feel the emotions they display. Their uncontrollable emotional display is due to their brains'

## The Funny Bone

The expression 'to tickle the funny bone' means to make someone laugh. The long bone at the arm (known as the humerus) starts at the elbow and goes up to the shoulder. The funny bone got its nickname because of that funny feeling we get after we hit it. The funny bone



is not actually a bone. It is a nerve called the ulnar nerve, running down the inside part of the elbow. The ulnar nerve informs the

brain about feelings in the fourth and fifth fingers (viz the ring finger and the little finger). When you hit your funny bone, you are actually hitting the nerve against the bone and compressing it. The result is an exhilarating feeling of numbness, tingling and pain that shoots through the area where the nerve runs – down the forearm and hand and into the ring and little fingers.

## **Crying is Good for Health**



We cry when we are distressed. We can also cry out of joy. Either way, physicians say, crying has a cleansing effect, both emotionally and physically. Emotionally, a good tearful cry eases out the stress of distress, and physically, it soothes and calms the body.

Interestingly, our body produces three kinds of tears – emotional tears which flush out stress and other toxins during crying, reflex tears which clear dust and irritants from our eyes, and continuous tears which lubricate our eyes and protect them from infections. Tears also lubricate the nasal passage through the tear ducts, and keep the nose moist and bacteria-free.

Therefore, for both men and women, tears are a sign of courage and strength, not of weakness. So, have a good cry when you need one.

***by Susan Koshy, Editor-in-Chief***

***Source: May 2020 issue of PreSense***

\*\*\*\*\*

## **Bicycling -Your Way to Joy Rides and Reaching Destinations the Healthy Way**

***(Commemorating World Bicycle Day on 3<sup>rd</sup> June 2020)***

*Cruising like a bird in the sky,  
With the wind beneath the ears,  
The air brushing against the face,  
The hair in a self-styled mess,  
Bliss, you have an identity.*



*– A Tribute to the Bicycle and the Cyclist*

The bicycle, also called a cycle or a bike (not to be confused with a motorbike), can be described as a vehicle consisting of two wheels held one behind the other by a frame, propelled by pedals and steered with handlebars attached to the front wheel, driven by a person called the cyclist or bicyclist. Interestingly, American cyclist, John Howard described the bicycle as a '*curious vehicle where its passenger is its engine*'. The bicycle can be ridden with little effort at 16–24 kilometres per hour, which is about four to five times the pace of walking, as it converts human effort and exercise to faster mobility.

### ***Evolution of the Bicycle***



**The Swiftwalker**  
***(Image Courtesy: irishtimes.com)***

*The bicycle can be both a humble means of conveyance, or a sophisticated vehicle with gears and accessories to show off about. A German inventor named Karl Von Drais is credited with developing the first bicycle in the early 19<sup>th</sup> century. His bicycle was a simple apparatus with no pedals,*

and a wooden beam. It had two wooden wheels with iron rims and leather-covered tyres. It was set into motion by the rider who sat on top of the bicycle and "walked" the bicycle, his feet leaving the ground during a descent to speed down. For this reason, this early bicycle was called 'swiftwalker'.

The development of the bicycle progressed from the swiftwalker to the velocipede (Greek root – 'velox/veloc' meaning swift and 'pes/ped' meaning feet) with the introduction of pedal-cranks attached to the hub of the front wheel to be propelled by the cyclist to move forward in motion. Since the velocipede was not equipped to absorb the vibrations and shocks of riding on rough ground, the rider felt all the 'bumps' from the ground. The velocipede was nicknamed 'boneshaker'. It was only after the invention of the pneumatic tyres that absorbed the vibrations, that bicycle rides became smoother for the cyclist.

The original wooden frames of the bicycle made way to stronger iron and steel frames but they were solid and heavy. A bicycle during the late 1800s could weigh upto 35 kilograms. The modern bicycle is better equipped and much lighter with the frames replaced by tubing with thinner walls made of steel, aluminium, titanium, and even carbon-fibre, depending on the sophistication of the model.

## Health Benefits of Bicycling

The bicycle is recognised as a good low-impact exercise – low-impact because it causes less strain than most other forms of exercise. Even then, it is a good muscle work-out as cycling/peddalling uses almost all the muscle groups in our body. No wonder, it has found its way into the gymnasium



**Image courtesy: [cyclinginindia.com](http://cyclinginindia.com)**

as the stationary bicycle. But it is no substitute for the fun way of getting and staying fit by bicycling outdoors, cruising the roads and pathways, taking in the nature, the wind and the feeling of soaring.

Cycling is an aerobic activity. This means that the heart, the blood vessels and the lungs get a workout. The respiration becomes deeper, drawing more air and oxygen for the body. There is increased body temperature and perspiration. It improves the overall fitness level.

The health benefits of regular cycling are increased cardiovascular fitness, increased muscle strength and flexibility, better joint mobility and lower stress levels as exercise releases the 'happy' hormones. Cycling as an exercise also boosts brainpower.

In addition, studies have shown that bicycling has disease-fighting benefits and helps ward off Parkinson's Disease as well as Alzheimer's Syndrome. It is also found to have a positive impact as a mode of exercise to help control the condition of Attention Deficit Disorder (ADD). The studies suggest that regular three hours of bicycling daily is effective to reduce the risk of these health conditions.

There is one deemed disadvantage in bicycling if the rider is not careful or mindful about taking care. Since there is a tendency to constantly hunch over during a bicycle ride, this position could cause stress on the upper and lower back, causing tightness or even pain. Therefore, as recommended while working before computers, it makes sense to take short breaks to give the body a stretch before mounting again to continue the ride. One cannot deny that the advantages of bicycling outweigh the disadvantages and therefore it is a worthwhile activity to pursue.

### **Contributing to a Clean Environment**

Bicycles use no fuel, needs no toxic batteries or oil to run. Besides, it is a time-efficient mode of conveyance, replacing the sedentary time spent in vehicles or public transports especially

during jams when fuel is consumed unproductively, adding to the environmental pollution and burning up the money.

Interestingly, Milan in Italy, which suffered much of the worst pollution in Europe, is preparing to reallocate 35km of street for new cycle paths when it reopens from lockdown after years of attempts to reduce car use in the city.

## **Bicycling in Sports**

Cycling became an Olympic sport at the first modern Games at Athens 1896 and is one of the few sports that have featured at almost every Summer Olympic Games. There are several world bicycle sports events like the grand tours – Tour de France, Giro d'Italia, etc.

## **World Bicycle Day**

Recognising the uniqueness and versatility of the bicycle, and its simplicity, affordability, reliability and environmentally friendly means of travelling, in 2018, the General Assembly of the United Nations declared 3<sup>rd</sup> June as World Bicycle Day. The objective is to promote bicycling among children and grown-ups for better health, social inclusion and a culture of cycling in the society.

## **Promoting Bicycling at the National Level**

The countries with the largest number of bicyclists are mainly in the Scandinavian region – Netherlands, Denmark, Belgium and Sweden. They, along with several countries in mainland Europe promote bicycling by providing good infrastructural facilities,



designated cycling tracks, priority to cyclists on the road, and insisting on helmets, lights and strict maintenance of the vehicles

to ensure safety. Many cyclists in these countries have customised bicycles as tandem



bicycles (made for two), tricycles, and carriers to accommodate children in front of the vehicle. Several countries in Asia such as Singapore also promote bicycling by providing infrastructural facilities, attractive cycle rides and tours to explore

the country, including 'cycle-by-night' tours. China too has a large number of cyclists who use it for their daily mode of travelling to work. The top five producers of bicycles are China, India, the European Union, Taiwan and Japan.

In India, with the large population, high cost of motored vehicles, growing levels of pollution and increase in the high risk in health,

**Hon'ble MOS Arjun Ram Meghwal**  
on his bicycle (*Image Courtesy: patrika.com*)

it is unfortunate that not enough attention and focus is given to promoting the

humble and efficient bicycle among the people, even though India is the second largest producer of bicycles in the world. The roads are ill-equipped for cyclists, road etiquette is lacking to take care of cyclists on road, and there is little incentive for opting to bicycle.

The growing interest in small health-conscious and socially active young groups in India needs to be encouraged so that more people recognise and prefer bicycling as an integral part of their daily lifestyle. It is commendable that the esteemed Honourable Minister, Mr Arjun Ram Meghwal is known to bicycle to the Indian Parliament House for work daily.

Bicycling as a mode of conveyance, pastime, recreational or social activity or a means of exercise to stay healthy, is ideal for pursuit. So, hop on one and let your feet take over.

As Sir Arthur Conan Doyle, British writer puts it, "*When the spirits are low, when the day appears dark, when work becomes*

*monotonous, when hope hardly seems worth having, just mount a bicycle and go out for a spin down the road, without thought on anything but the ride you are taking."*

**by Susan Koshy, Editor-in-Chief**

**Source: June 2020 issue of PreSense**

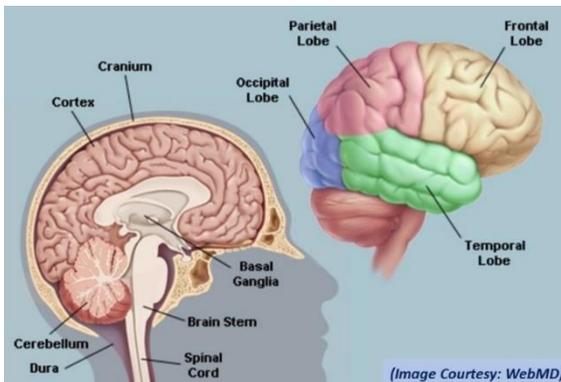
\*\*\*\*\*

## The Alzheimer's Disease, Where One Forgets, and Fails to Remember

The Alzheimer's Disease (AD) is a progressive disease that impairs memory and other important mental functions. The brain cell connections and the cells themselves degenerate and die. The first main symptoms of the disease are memory loss and confusion.

The terms dementia and AD are often used interchangeably. Dementia is a broader term for conditions with symptoms relating to memory loss such as forgetfulness and confusion. Dementia includes specific conditions, such as AD, Parkinson's Disease, traumatic brain injury, and such conditions which display these symptoms. AD is a type of dementia.

### How Alzheimer's Occurs



The human brain is one of the largest and most complex organs in the human body. Neurons (also called nerve cells) are the fundamental units of the brain and the nervous system. The healthy human brain contains tens of billions of neurons that process and transmit information trillions of connections called synapses via electrical and chemical signals. Neurons are a major player in the central nervous system. They send messages between different parts of the brain, and from the brain to the muscles and organs of the body.

The normal brain shrinks to some degree in healthy aging but it does not lose neurons in large numbers. In AD, the damage is widespread, as many neurons stop functioning, lose connections with other neurons, and die. In AD, processes vital to neurons and

their networks, including communication, metabolism, and repair are disrupted.

According to world renowned neurologist, Dr A V Srinivasan (Dr AVS), who spoke exclusively to PreSense, our brain has millions of neurons and neurotransmitters. In the pre-AD condition, plaques are formed when protein pieces called Amyloid-Beta clump together. Amyloid-Beta is derived from a large protein found in the fatty membrane surrounding the nerve cells. It is chemically sticky and therefore tends to build up into plaques or small clumps. These clumps can block cell-to-cell signalling at the synapses (junction connecting two neurons, and through which electric nerve impulse is transmitted). This condition can roughly be compared with the formation of arterial plaques that restrict free flow of blood through the blood vessels, causing cardiac arrest.



### **Progressive Stages in Alzheimer's Disease**

Dr AVS explains the stages leading to the onset of the symptoms in Alzheimer's with ABCD – initial Anxiety followed by Behavioural and Cognitive change, leading to dementia. The symptoms will occur only after 15-20 years. He says that our memory is a web of thoughts. In Alzheimer's, the web diminishes in time. A person with AD gradually loses his or her ability to live and function independently. The disease is fatal.

- In the pre-clinical or early stage of AD, the common symptoms are forgetfulness, losing track of the time and becoming lost in familiar places. Dementia displayed during this stage is often overlooked as the onset is gradual.
- In the middle stage of AD, dementia progresses and the symptoms become marked. The patient becomes forgetful of recent events and people's names. They tend to repeat their questions without registering the responses they get. They become lost even at home. They face increasing difficulty with communication. They begin to require help with their personal care.

- The extreme or late stage is especially challenging for the patient as well as the carer or family. The patient fails to identify himself in the mirror (called mirror sign). There are serious memory disturbances and the symptoms are pronounced. The patient becomes unaware of the time and the place, fails to recognise relatives and friends, needs help for walking and self-care. The behavioural change can include aggressiveness,

Dr AVS observed that there is a growing number of Alzheimer's patients in India because of the increasing longevity of the population, where over 8 crore people are over 70 years of age. The occurrence of AD among the Indian population is one out of every 1000 in the 40-65 years age bracket, one out of 50 in the 65-70, one out of 20 in the 70-80, and one out of 5 in the above 80 years' age bracket. AD cuts across caste, creed, race and gender.

The Alzheimer's Disease International (ADI) is the umbrella organisation of over 100 Alzheimer associations around the globe, established to raise awareness about AD and other causes of dementia. In India, the Alzheimer's & Related Disorders Society of India (ARDSI) been in operation since 1992, providing specialised care services for people with dementia. September 21<sup>st</sup> is commemorated as Alzheimer's Day.

### **Treatment – A Brighter Era Ahead?**

More than a hundred new medications, some of them preventive, are currently being explored. Even if the damage in the late stages of AD is irreversible and incurable, investigations show hope of slowing the disease's effects.

Dr AVS said that so far, the drugs for AD could help in deferring the deterioration of the condition. This positive effect should override the side effects of the drug as headache, nausea, hallucination. Drugs are also available as patch on the back. Anti-inflammatory drugs can delay the onset of AD as it treats the inflammation that occurs in the neurons. Medical research is currently going on, for vaccination and nasal spray. However, Dr

Srinivasan cautions that it takes 10-12 years for any researched medicine to reach the market.

### **Prevention of AD**

AD is a complex disease where factors like age and genetics are beyond one's control. But a brain-healthy lifestyle is believed to help deter its onset.

- regular exercise – at least 150 minutes of moderate intensity exercise per week, like walking and swimming – ideally a combination of cardio exercise and strength training.
- social engagement – engage in social networking as this provides emotional strengthening. Guard against personal isolation as a lifestyle.
- healthy diet – regulate the diet so that there is plenty of vegetables and fruits and nuts. Eat in moderation and cut down on sugar content.
- mental stimulation – engaging in brain-stimulating activities is exercise for the brain. Learn new languages, skills, art forms, musical instruments and work on puzzles and board games.
- quality sleep – good quality sleep is essential for flushing out toxins from the brain. Poor sleep has been linked with build-up of amyloid-beta in the brain, leading to disruption of memory formation and to AD. It is therefore essential to maintain a regular sleep schedule.
- stress management – stress takes a toll on the health of the brain. Relaxation techniques and yoga and pranayama, meditation and prayers are help deal with stress. Remember to laugh often in life. It is a mood booster.
- vascular health (controlling hypertension, cholesterol level, weight and obesity, life style for healthy living and controlled pleasure habits as smoking and drinking alcohol.) – maintain cardiovascular health, hypertension, sugar content and

cholesterol. Take all prescribed medication to maintain a healthy balance of the body and mind.

### **Caring by Carers**



One must not ignore the family and the carer who take care of the AD patient. It is a very challenging situation physically, emotionally and mentally. Carers out of despair could show impatience with the patient who is unaware of the trauma he is causing his family or carer. Dr Srinivasan shared five points of caution the carer must exercise while attending to the patient:

- Never raise the hand against the patient (never be violent with him).
- Give food when the patient asks for it.
- Never leave the patient alone.
- Never let the patient be undernourished.
- Administer the drugs on time regularly.

The carer needs to empathise with the patient and understand the reason for the patient's behaviour and soothe him. Professionals advise that carers should not take any behaviour of aggressiveness or insensitiveness of the patient personally and know that it is a result of the effects of AD that he is unable to make sense of his environment, not his ability to know and feel the love shown to him.

Concluding on an optimistic note about the scope of finding improved and even preventive treatment for AD based on the ongoing research, Dr AVS said, "*Yesterday's discovery is today's work and tomorrow's promise.*"

**by Susan Koshy, Editor-in-Chief,  
with Professional Opinions Contributed by  
Dr A V Srinivasan, World Renowned Neurologist  
Source: October 2020 issue of PreSense**

**\*\*\*\*\***

## Provide Siddha System of Medicine The Status It Deserves

The world has been going through a chronic COVID-19 crisis since early 2020. Researchers and scientists have been spending money and time and concerted efforts in finding relief from the new virus that has taken over the world.

While the World Health Organisation (WHO) and similar health organisations have been promoting research in the allopathic system of medicine, back in India, traditional medicine, especially Siddha, has been making inroads in successfully arresting infection by the COVID virus.



Siddha medicine is one of the oldest traditional systems of medicine practised in the southern part of India, mostly in Tamil Nadu and Kerala. Siddha means 'perfection'. It has a holistic approach and covers the physical, psychological, social and spiritual well-being of an individual in the medical pursuit of combatting infections in the body.

Siddha is based on the principles relating to the elements and humours (*Vaadham*, *Pitham* and *Kapham*) of the human body, which when imbalanced, result in diseases and adverse medical conditions.

To understand the role of Siddha medicine in dealing with the current medical crisis, your eMagazine's Editorial Team talked to various Siddha doctors and researchers.

In the 2015 Chennai floods that threatened an epidemic of water-borne diseases, '*Nilavembu Kudineer*', a *Siddha* polyherbal formulation, was widely distributed and administered among the local people, and this move successfully averted any threat of an epidemic. PreSense understands that hospitals in Tamil Nadu state had co-administered Siddha medicine to COVID patients, and about 800 of them were taken up for research to find out the

effectiveness of Siddha medication. These selected patients had shown moderate/severe symptoms of the COVID infection. Post-Siddha medication to them, the mortality, symptomatic severity and recovery time were relatively lower in these cases than in those who were not given Siddha medication. Further 30,000 COVID patients were treated in exclusive Siddha care centres and 98% of the patients recovered fully, while 2% of the patients were referred to a modern medical facility for oxygen support.

In the Tirunelveli District of Tamil Nadu, a closed group of 40,000 people were administered Siddha medicine as a preventive measure, and the results were successful with no case of COVID infection reported in the group. This experience has been documented by the medical team.

With the experiences and the results so encouraging, it is puzzling why Siddha has not found due recognition and status it deserves. The Editorial Team ascertained the following reasons for this lacuna:

- Siddha originated in Tamil Nadu. Siddhar Agasthiyar is considered the founding father of this medical system. Therefore, all the literature relating to this system of medicine is documented in Tamil. Little effort in translation is done to promote it among the people in other parts of India, such as North India.
- The local and national-level administrators and governments have not been giving due recognition to the traditional medicines, including Siddha. Therefore, Siddha researchers and practitioners have little motivation and incentive to promote its virtues, especially as preventive medicine and supplement.

*PreSense* proposes the following immediate steps be taken by AYUSH (Ayurveda, Yoga, Unani, Siddha and Homeopathy) Ministry of the Government of India to deal with these inhibitors, and promote Siddha to the status and utility it deserves in the field of preventive medicine and treatment:

- Translate the literature and texts relating to Siddha, which are currently in Tamil, to other Indian languages, especially Hindi to reach North India, and English to promote it abroad.
- Provide Central Government funding for state-level development of Siddha welfare centres and research.
- Introduce Siddha welfare centres at all state capitals and metropolitan cities of the country, including the Parliament House.
- Initiate MoU (Memorandum of Understanding) with the government of those countries where the South Indian population (which is generally familiar with the Siddha system of medicine) is predominant, to enable the diaspora to avail Siddha medication and treatment.
- Initiate scientific validation of Siddha System, to make the system acceptable globally. It may be recalled that it was only after Johns Hopkins Hospital in the USA and Stanford Hospital under Stanford University validated some Yoga exercises scientifically, that Yoga became internationally acceptable. The AYUSH Ministry should encourage the National Institute of Siddha (NIS) to undertake 'original' research (*ie.* identifying the problem and finding a solution to it) on Siddha system, and publish research papers in internationally reputed journals with good 'Impact Factor' (a measure of the importance of a journal).
- From our conversation with various Siddha Practitioners and Faculty members of NIS, we observed that they are not aware of the methods of scientific validation of the system and submission of Research Papers to Journals with good 'Impact Factor'. An immediate awareness programme is to be undertaken by National Institute of Siddha.

It is understood that six research papers under Siddha are expected to be published within the next three months. This is a good initiative in the way forward to develop and promote Siddha which is a holistic and wholesome alternative for healthy living and treatment of medical conditions. But much more needs to be done.

Incidentally, the High Court of Madras, in a case filed by a Siddha doctor, had raised questions on why Siddha medicine was not being given due allocation of funds by the Central Government.

The Editorial Team appeals to the Central Government and the AYUSH Ministry to provide specified budgetary allocation and promote initiatives to develop and recognise Siddha, just as it did to promote our indigenous Yoga to the world.

***by K Srinivasan, Publisher & Managing Editor, and Susan Koshy, Editor-in-Chief***

***Source: November 2020 issue of PreSense***

\*\*\*\*\*

## Autism – A Differently Abled Special Condition

April 2<sup>nd</sup> is observed as World Autism Awareness Day since 2008, ever since the United Nations Organisation (UNO) recognised and designated the date. World Autism Awareness Day is observed to inform people, so that they know and understand about the world of autism. This awareness should help them to accept and empathise with those affected by autism, and extend encouragement and support to them as well the parents and other caregivers of the autistic.



As per the 2011 Census of India, there are nearly 80 lakh children below the 19-year age group with disabilities, among which nearly 6 lakh have intellectual disability. The study also states that one in 66 children was autistic in India. Despite being an alarming issue, awareness about autism is low, even though its incidence has increased over the last decade.

The Editorial Team sought the professional opinion of Dr A V Srinivasan, world-renowned neuro-physician, about autism. Dr Srinivasan has been a practising specialist, and visiting professor to international universities, for over four decades.

Autism, or Autism Spectrum Disorder (ASD) is a complex developmental condition that involves persistent challenges in social interaction, speech, non-verbal communication, and restricted/repetitive behaviour. The effects of ASD and the severity of symptoms are different in each person. Incidentally, Spectrum Disorder is a range of related conditions/disorders, having similar symptoms or similar causative mechanism.

ASD has five identified sub-types: Autistic Disorder, Asperger's Disorder, Rett's Disorder, Child Degenerative Disorder and Pervasive Developmental Disorder (Not Otherwise Specified). While the conditions and symptoms among these sub-types are

similar and seem overlapping, Asperger's Disorder is the mildest of all the conditions. Rett's is predominant in girls.

ASD occurs in all ethnic, racial, and economic groups. The cause is attributed to a combination of genetic and environmental factors. Dr Srinivasan shared his considered observation based on his 40 years' clinical experience, that parents who work excessively on computers, tend to have children who are affected by autistic and dyslexic tendencies. Dr Srinivasan however, was cautious to underline that this observation is not yet substantiated by any conclusive study, and is based purely on his experiential observation.

The ways in which people with autism learn, think and problem-solve can range from highly skilled to severely challenged. Some people with ASD may require significant support in their daily lives, while others may need less support and, in some cases, may be able to live entirely independently. The signs of autism usually appear by the age of 2 or 3 years. Some associated development delays can appear even earlier, and often, it can be diagnosed as early as 18 months after birth. Research shows that early diagnosis and intervention can lead to positive outcomes later in life for people with autism. Although ASD can be a lifelong disorder, treatments and services can improve the person's condition and ability to function.

According to Dr A V Srinivasan, autism can be generally understood by its acronym, AUTISM:

**A** – Abnormally excessive number of neurons that result in autistic tendency, causing

**U** – Unbalanced excited and inhibitory network,

**T** – Test of facial and emotional expressions, which are worst affected in these children,

**I** – Impairment of verbal and non-verbal communication,

**S** – Social interaction impairment, all of which are due to

**M** – Modulation of neurexin and neuroligin genes being affected, causing the condition.

### **What Causes ASD?**

Scientists believe that both genetics and environment likely play a role in ASD. Researchers have identified a number of genes associated with the disorder. ASD could be a result of disruptions in normal brain growth very early in development. Many of the genes found to be associated with autism are involved in the function of chemical connections between brain neurons (synapses).



Dr Srinivasan explained that synapses are brain structures that allow the neurons to transmit an electrical or chemical signal to another neuron. Neurexin and neuroligin are proteins associated in the extracellular space between synapses in the brain, and they play a crucial role in the functionality of the brain's synaptic circuitry.

Synaptic pruning is a natural process that occurs in the brain from the very early years of a child. During synaptic pruning, the brain eliminates extra synapses that a new-born baby is normally born with. 'Slicing' or 'pruning' enables the child to develop normal motor movement. But for unknown reasons, if the excessive neurons are not removed, the excessive connection of neurons cause abnormal synaptic function and neurodevelopmental disorders such as autism spectrum disorders.

Theory of mind is a popular term from the field of psychology. Theory of Mind is the ability to appreciate the mental state of the other person, as it provides the ability to predict and interpret the behaviour of others. This is possible if we have Mirror Neurons in our brain. These neurons do not function normally in the autistic child. Thus, the child is unable to understand the mind of the other person. This means he will not have empathy, sympathy and apathy as the mind needs to appreciate the other person to feel these emotions. Normally, a child learns to socialise by 4 years of age, through observation, but an autistic child is not able to, due to inadequate mirror neurons.

## **Signs and Symptoms**

Typical infants are curious and interested in the world and the people around them. By the first birthday, a typical toddler interacts with others by looking at people in the eye, copying words and actions, and using simple gestures such as clapping and waving. They show interest in social games.

But a young child with ASD might have a very hard time learning to interact with other people. They might not even be interested in other people. Others might want friends, but not understand how to develop friendships.

They may have problems with showing or talking about their feelings. They might also have trouble understanding other people's feelings. Many people with ASD are very sensitive to being touched and might not want to be held or cuddled. Self-stimulatory behaviours like involuntary repetitive gestures are common. Anxiety and depression can also affect some of them with ASD.

Therefore, people with ASD often have problems with social, emotional, and communication skills. They might repeat certain behaviours and might not want any change in their daily activities. Many people with ASD also have different ways of learning, paying attention, or reacting to things. Signs of ASD begin during early childhood and typically last throughout the person's life, maybe with increased or decreased intensity.



**Autism Awareness  
Ribbon**

Children or adults with ASD could display the following typical symptoms:

- avoiding eye contact and wanting to be alone,
- having trouble understanding other people's feelings,
- preferring not to be held, or might cuddle only when they want,
- not knowing how to talk, play, or relate to people,
- repeating words or phrases said to them,
- repeating actions like flapping hands, or rocking their body,
- having trouble adapting when a routine change,

- Losing skills they once had (eg. stop saying words they were using)

### **How is Autism Treated?**

So far, there appears to be no cure for ASD. Therapies and behavioural interventions are designed to remedy specific symptoms and can substantially improve those symptoms. The ideal treatment plan coordinates therapies and interventions that meet the specific needs of the individual, and the earlier the intervention, the better.

**Medications:** While medication cannot cure ASD or even treat its main symptoms, there are some that can help with related symptoms such as anxiety, depression, and obsessive-compulsive disorder. Antipsychotic medications are used to treat severe behavioural problems. Seizures can be treated with one or more anticonvulsant drugs. Medication, used to treat people with attention deficit disorder, can be used effectively to help decrease impulsivity and hyperactivity in people with ASD. Parents, caregivers, and people with autism should use caution before adopting any unproven treatments.

**Therapy and Training:** Early behavioural/educational interventions have been very successful in many children with ASD. In these interventions, therapists use highly structured and intensive skill-oriented training sessions to help children develop social and language skills, such as applied behavioural analysis, which encourages positive behaviours and discourages negative ones.

Dr Srinivasan observed that training sessions with pictorial representations, including illustrative games like jigsaw puzzles, and music sessions and learning, help.

In addition, family counselling for the parents and siblings of children with ASD, often helps families cope with the particular challenges of living with a child with ASD.

***by Susan Koshy, Editor-in-Chief***

***Source: March 2021 issue of PreSense***

**\*\*\*\*\***

## Experience of the Parent of Autistic Child

Susan Koshy, Editor in Chief, PreSense had a conversation with Smt Kamakshi Swaminathan, qualified trainer, counsellor and guide in multiple disability and neurological disorder, accredited by Spastic Society of India. She is an active volunteer in many schools,

imparting management techniques for autistic children, and providing parent guidance and family counselling. She is also a volunteer with Saksham, Madurai, which supports autism-affected children and adults through training, guidance and counselling, and research.



Smt Kamakshi is a parent of autism-affected 22-year-old son, Chandrashekar. She shared her personal experiential knowledge on how to care for an autistic child.

Smt Kamakshi said that it is important that the parents of an autistic child be aware and informed of the condition, and acknowledge it to enable early intervention to address it with counselling, training and therapy.

The autistic child should be treated as normally as possible. The only difference is that more time would be taken by the autistic child, or for him, for his routine or for learning. Therefore, one needs patience, creativity, and empathy, and be willing to give the required space to the child. With time and training, the child will be able to learn to take care of himself, with periodical supervision.

The society's attitude towards such children needs to be sensitised. Usually, an autistic child's unusual behaviour is viewed as awkward by the society. The society must understand that such behaviour is not voluntary. It is triggered by an involuntary response to an internal stress situation. The society should be sensitive in the response to such erratic behaviour in public and be empathetic, not sympathetic.

Smt Kamakshi referred to three books that were written by autistic-affected adults. These books gave her insight to understand the mind of the autistic-affected, and her son's mind too. These books were '*Ido in Autismland*' by Ido Kedar, '*Dibs in Search of Self*' by Virginia Axline, and '*Wasted Talent*' by Krishna Narayanan.

Smt Kamakshi is involved in a project through Saksham, which trains children of 14 years of age and above, so that the child is able to take care of himself. The training is in self-maintenance and self-hygiene, and pre-vocational training. Saksham is also involved in research-oriented activities, such as yoga and music for therapy of these children.

Interestingly, Smt Kamashi shared about a 20 years' research on 'neuroplasticity', in various international institutes. She explained that in the case of an affected part of the brain as in autism, if consistent training is imparted, the other unaffected parts of the brain can take up that task. For example, if a school student forgets his lunch box, his other friends could pool in and give part of their lunch to him to satiate his hunger. Similarly, the other parts of the brain can participate so that the deficiency in one part of the brain is made up by the other parts. This is neuroplasticity in simple terms. This is based on the theory of habit-forming, explained by Malcom Gladwell in his bestseller, '*Outliers: The Story of Success*'.

This theory and research, is a hopeful move forward for parents of autistic children.

**by Susan Koshy, Editor-in-Chief**

**Source: March 2021 issue of PreSense**

\*\*\*\*\*

## Observing 20 Minute Silence Daily can Free you of Illnesses

The adage "Silence is Golden" could not have been truer if we go by leading neurologists and scientific researchers who have found that the power of silence can be overpowering. Overpower and control your illnesses, your cognitive behaviour vis a vis the society, anger management, jealousy, envy, greed, all negative emotions that produce socially unacceptable practices. Practise silence for 20 minutes a day and see the difference in your thought process, behaviour and your well-being, says noted neurologist Dr A V Srinivasan.



### The Beginning

The question is how does one practice silence, the concept seems to be so abstract Well, it's not. The first step is towards controlling respiration. Scientific research has shown that if a human being breaths six times a minute it has a remarkable effect on the cerebrum the nerve center of the brain which controls not just cognitive function but also psycho motor abilities (movement of the body). Learn to breathe properly (pranayama), because respiration controls thoughts and thoughts-controlled lead to silence and silence leads to absolute lack of sound. Agitated thought leads to anger, violence and Calm thought leads to peace and love towards others.



**Silence as a power is a belief in all faiths**

All faiths believe in the power of silence, the Hindus, Christians, the Muslims, the Jews and the Buddhists. For Hindus recitation of the name of lord Rama leads to silence, basically the human brain functions in a default state, until influenced by external thoughts and actions that internalizes it into the human body. For the Muslims it is Allah, for the Christians it is Jesus or Christ and for the Buddhists its Buddha, and the Jews believe Silence is a way to achieve wisdom. The A B C of faith is Allah, Brahma, Christ and the A B C D of diseases is Asthma, BP, Cancer and Diabetes.

Please listen to the full discussion and understanding the power of silence from internationally renowned neurologist Dr A V Srinivasan. He is also explaining the method of observing silence and the benefits.

Dr AV Srinivasan interview

<https://youtu.be/kBpbxsaGH98>

***Report by TN Ashok, Consulting Editor  
Source: August 2021 issue of PreSense***

\*\*\*\*\*

## **Managing Success with Right Attitude to Avoid Failure**

Over the past ten years, there has been a great change in the attitude of many youngsters who attain small and early success. They behave as if they have achieved a great deal in life. This attitude is reflected in their arrogant and insensitive behaviour. This attitude is especially noticeable in those working in such domains as the Media, Entertainment, IT (Information Technology) and Politics. With the sudden inflow of money, or a spurt of popularity, or proximity to people in power, these youngsters display this unhealthy attitude, failing to realise that this attitude would only distance themselves from their well-wishers, and eventually lead to disaster and failure.

There have been debates about how to counsel these youngsters and mentor them on managing their initial success in a mature manner, for their sustained growth. In July 2020, NGPL (Next Gen Political Leaders), one of the initiatives of PreSense, organised a Webinar on this subject and had invited two young MPs to share their views on the topic.

We also contacted Dr A V Srinivasan, a world-renowned neurologist for his views on why such behaviour happens and how to prevent such unhealthy attitude. He concurred that many youngsters these days are unable to manage their initial success like money, fame, and status in a mature way. They tend to become arrogant and insensitive to others, and then they encounter their own downfall due to their attitude.

He explained that when success occurs, people can choose to experience either pleasure or happiness. Pleasure is emotional and short-lived. When the person relates his success to his ego, the experience is 'pleasure'. It is like intoxication. This mode puts pressure on the individual to achieve more, like going back for more doses, as success goes to the head. That is why these people behave in an arrogant manner.

When people connect their success to a feeling of selflessness and relate it to the society's benefit (not personal ego), it becomes

happiness. The people in the happiness mode have a good attitude, and mature behaviour and character. That makes them achieve more and more but with a selfless yearning. While pleasure is short-lived, happiness is long lasting.

Dr Abdul Kalam always related his success to the society. He is therefore still revered by the people. On the other hand, although Hitler conquered almost the whole of Europe, he resorted to 'pleasure killing' of the Jewish community. That led to his downfall. Had he not resorted to 'pleasure killing', he would have been remembered as one of the celebrated leaders. Similarly, King Alexander wanted to conquer the world for his individual pleasure. But he died due to mental stress at a young age. On the other hand, King Raja Raja Cholan conquered many countries 1000 years ago. But he dedicated his success to his people and built the great monument of 'Tanjore Temple'. He is still celebrated after 1000 years.

Successful youngsters should relate their achievements to happiness and not pleasure. For this, they should develop the right, healthy attitude. They should seek the guidance of mentors, if necessary, to develop and nurture the right attitude. It would be a great loss to the nation, if these youngsters fail to be groomed in the initial stage of success, and then face failure due to their unbecoming attitude.

***by K Srinivasan, Publisher and Managing Editor***  
***Source: July 2020 issue of PreSense***

\*\*\*\*\*

## Index

### 8

8-shaped walking.....56, 57

### A

Aishwarya Rai ..... 36  
 Alcohol.....35, 87  
 Amitabh Bachchan ..... 36  
 Arjun Ram Meghwal ..... 100  
 Attitude ..... 26  
 Autism .....111, 115  
 Ayurveda .....45, 47, 51, 53, 108

### B

Barefoot walking ..... 55  
 Bicycle.....96, 99  
 Bihar School of Yoga.....41, 43  
 Body-Mind Relaxation ..... 40  
 Brain .....22, 86, 93

### C

Cartoon..... 14  
 Cholesterol ..... 24  
 Computer Vision Syndrome..... 20  
 Coronavirus ..... 88

### D

Dementia .....83, 102, 103  
 Diabetes ..... 24, 49, 56, 66, 120  
 Digital Journalists Association of India  
 .....12, 14, 18  
 Digital Journalists Association of India  
 .....12, 14, 18  
 Dr J Balasubramanian ..... 63  
 Dr A V Srinivasan .....42, 74, 86, 87, 103,  
 106, 111, 112, 119, 120, 121

Dr Anitha Balachander .....47, 49  
 Dr APJ Abdul Kalam .... 6, 7, 9, 13, 14, 17,  
 18, 52, 53, 70, 122  
 Dr Chandra Gupta.....31, 36  
 Dr Dhanashree Ratra ..... 33  
 Dr June Almeida ..... 88  
 Dr N Suchitra ..... 29  
 Dr R Jagannathan.....13, 51, 88  
 Dr R Lakshmi Narasimhan..... 85  
 Dr Ramamurthy ..... 9  
 Dr V Ponraj ..... 9  
 Dr Y S Rajan .....7, 14

### E

Education.....8, 14, 18  
 Education Loan Task Force .....14, 18  
 EQ Emotional Quotient .....79, 81

### G

Generic Medicine .....37, 39

### H

Health. 13, 19, 48, 50, 52, 59, 61, 64, 86,  
 95, 97, 107  
 History ..... 13

### I

IIT Madras..... 18  
 India 2020..... 7  
 Indian Parliament ..... 14  
 Introduction.....5, 14  
 IQ Intelligence Quotient ..... 80

### J

Jan Aushadhi..... 38

**K**

K Srinivasan .....9, 17  
Kidney..... 25

**L**

Laughter ..... 89, 90, 91, 92, 93, 94  
Life expectancy..... 34

**M**

Macular hole .....32, 33  
Media .....13, 14  
Milestones..... 14  
Mind .....86, 113

**N**

Neurology.....74, 85  
Next Gen Political Leaders..... 18  
Next Gen Political Leaders.....18, 121  
*Nilavembu Kashayam*.....45, 48, 50  
Nobel Laureates ..... 74, 76

**P**

Pranayama. 64, 65, 66, 67, 74, 75, 76, 77  
Premenstrual Syndrome..... 27  
Prime Point Foundation..... 1, 9, 14, 17  
Prince cartoons..... 13  
Priyadharshni..... 13  
Priyadharshni Rahul..... 13

**R**

Rabies .....59, 62, 63  
Rajasic food .....69, 70, 71  
Rajendran V ..... 8  
Rajinikanth..... 36

Right Attitude ..... 121

**S**

Sansad Ratna Award.....8, 14, 18  
Sansad Ratna Awards .....14, 18  
Siddha System .....45, 107, 109  
Smoking .....22, 25, 35, 36  
Srinivas Gopal..... 13  
Srinivasan K 9, 10, 11, 12, 13, 17, 33, 36,  
44, 51, 52, 58, 67, 73, 74, 110, 122  
Stress ..... 64  
Sukruti Narayanan .....9, 39  
Susan Koshy 8, 12, 58, 63, 74, 78, 82, 93,  
95, 101, 106, 110, 116, 117, 118  
Swami Niranjananda Saraswathi ..... 43  
Swami Satyananda Saraswati. 44

**T**

T N Ashok.....8, 13  
Tamasic food .....69, 71  
TN Ashok ..... 120  
Tobacco ..... 35  
Triambak Sharma ..... 12

**V**

V Rajendran ..... 8  
Vivek Hari Narayanan ..... 39

**W**

Working women ..... 27

**Y**

Yoga Nidra ..... 40, 41, 42, 43, 44  
Yoga Shikshak Suresh Veera ....44, 67, 73