

# Indian Society of Lifestyle Medicine

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INDIAN SOCIETY OF  
LIFESTYLE MEDICINE

Issue 1

E-Newsletter

June 2022

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## Message from the President ISLM

Dr. Sheela Nambiar

It gives me great pleasure to see this very first newsletter being rolled out from ISLM. This is going to be a window into our activities and progress as a society. The enthusiastic participation of those involved with the conception and deliverance of this newsletter is much appreciated.

I have been privileged to lead this organization over the last year and a half and witness the enthusiasm of the physician members from various specialties and the affiliate members of ISLM as they engage in the various activities like our conference, webinars, journal club, GBM and so on. You are the forerunners of the LM movement in India and for that I thank & salute you.

I believe India is in dire need of Lifestyle Medicine to combat the ever-increasing burden of NCDs as a result of poor lifestyle choices. When physicians, dieticians and psychologists are empowered with the understanding of this unique specialty, we are capable of making a sea change in the lives of our patients changing the current 'sick-care' system to a true 'health-care' system.

As an organization, the members of ISLM are spearheading this paradigm shift in healthcare by truly improving the quality of our own and the lives of those we touch.

I hope you enjoy the newsletter.

### **Dr. Sheela Nambiar MD (ObGyn)**

Lifestyle Medicine Physician DipLM IBLM

Fitness Consultant NAFC

President - Indian Society of Lifestyle Medicine (ISLM)

Council member - Global Positive Health Institute (GPHI)

Council Member - True Health Initiative (THI)

Founder -Training For Life (TFL)

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## From the Editor's desk...

Dr. Richa Lal

Dear friends,

We present this inaugural Issue of the newsletter with much joy & gratitude.

Readers from diverse specialties would find meaning in its variegated spectrum of contents: the insightful invited review articles, the meaningful case snippets, the "yummilicious" and healthful recipe, & a very inspirational book abstract. A safari through the activities of ISLM will beckon you to join the LM family.

We eagerly invite your valued contributions for the subsequent Issues.

It has been my privilege to conceptualize and edit this newsletter-my sincere gratitude to all the authors, the editorial board and the entire team of ISLM.

We present this to you with a prayer that we as doctors could symbolize "true wellbeing" & hence, be instrumental in "true healing" of all those who entrust their health in our hands.



**Richa**

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INDIAN SOCIETY OF  
LIFESTYLE MEDICINE

## About “Indian Society of Lifestyle Medicine”



Dr. Anjali Nakra  
Secretary, ISLM

Contributed by:



Dr. Suvetha K  
CCL-MIG-Education

The Indian Society of Lifestyle Medicine (ISLM) was born at Asian Society of Lifestyle Medicine conference in 2017 due to the efforts of 12 likeminded physicians who aspired to educate physicians in all specialties to incorporate Lifestyle Medicine (LM) in their daily practices. ISLM was registered as a society in July 2019 with Dr. Samuel Hansdak as the President, Dr. Sheela Nambiar as the Secretary, Dr. Pramod RK as treasurer and Dr. Jacqueline Micheal as Joint Secretary. Within a short span of its inception, the society marked its global presence by becoming a member of the Lifestyle Medicine Global Alliance in October 2020 and reaching to Level 3 membership in 2021.

The current executive committee was elected in August 2020 with Dr. Sheela Nambiar as the President, Dr. Anjali Nakra as the Secretary, Dr. Rabbanie Tariq as Joint Secretary and Dr. Ravi Modali as Treasurer. The Board of Advisors of ISLM include renowned physicians: Dr. Brij Mohan Makkar, Dr. Sunil Shroff, Dr. Kadri, Dr. Sheela Krishnaswamy and Dr. V Mohan.

The objective of the society is to equip our medical professionals with the principles and practice of Lifestyle medicine through seminars, conferences, IBLM examination and impacting the medical curriculum for both undergraduates and postgraduates to include the lifestyle medicine competencies.

*The society functions with a mission to "create a transformative culture of health and wellbeing for humanity by utilizing the principles of Lifestyle Medicine to prevent, manage and, when possible, reverse lifestyle-related diseases like diabetes, obesity, hypertension, metabolic syndrome, depression and so on".*

*ISLM promotes evidence-informed "Lifestyle management" as the primary step in the prevention and treatment of lifestyle related diseases.*



## About "Indian Society of Lifestyle Medicine"

<https://www.islm.org.in/>

Doctors from any branch of modern medicine can get [membership](#) of ISLM. The society offers education, training and support for members to practice lifestyle medicine. The different Member Interest Groups (MIG) of ISLM like clinical MIG, education MIG and research MIG conduct various activities throughout the year for capacity building of its members. ISLM organizes periodic webinars addressing the different pillars of life style modification. Renowned physicians within and outside the country like Dr. Neal Bernard, Dr Ravinder Mamtani, Dr B M Makkar, Dr Venkat Srinivasan, Dr. Hari Nair and Dr. Vinod Mittal, to name a few, were speakers in the webinars. Other activities of the society include organizing grand rounds, workshops, celebrating international and national days relevant to lifestyle medicine and facilitating the preparation of members for the Board certification examination. The [LM Board certification exam](#) is being held annually since 2020 in collaboration with the International Board of Life style Medicine (IBLM). In 2020, 12 physicians from India obtained the diplomate and in 2021, 28 more physicians graduated. ISLM hosts its international conference annually. The most [recent conference](#) was organized virtually between 27th- 28th November 2021 and was well attended and appreciated.

**Member Interest Group-Education and Ethics:** The office bearers are: Dr. Lakshmi Sundar (Director), Dr. Bhavani V (Chair), Dr. Mrunal Pathak (Co-chair) & Dr. Suvetha Kannappan (Core Committee Leader).

The mandates of MIG-Education & Ethics are: i) To draft a code of ethics for members of ISLM; ii) To organize periodic webinars for its members; iii) To prepare educational resources for physicians and the public; iv) To bring out a quarterly newsletter; v) To support physicians writing the IBLM exam

**Member Interest Group-Clinical Practices:** The office bearers are: Dr. Spoorthi Arun (Director), Dr. Paula Goel (Chair), Dr. Revathi S. (Co-Chair) & Dr. Pravina Kale (Core Committee Leader)

The mandates of this MIG are : i) To draft evidence-based guidelines for the main pillars of lifestyle medicine i.e. diet, exercise, mental health & sleep; ii) To collate research studies and educational resources; iii) To adapt and include India specific modalities and approaches to international guidelines, but in an evidence-based manner

**Member Interest Group- Research:** The office bearers are: Dr. Meera Raghavan (Director), Dr. Nrutya Subramanyam (Chair), Dr. Prathamesh Kamble (Co-Chair) & Dr. Ishani Hanspal and Dr. Yogita Bavaskar (Core Committee Leader).

The mandates of this MIG are: i) To create research protocols based on LM interventions in clinical practice; ii) To hold Journal clubs on quarterly basis; iii) To collaborate with organizations for secondary data vetting & analysis; iv) To conduct a survey of all ISLM members regarding principles and practice of LM; v) To conduct KAP studies pertaining to all pillars of lifestyle medicine; vi) To conduct an intervention based study project on the impact of "Portfolio diet" on lipid profile; vii) To collaborate with GAIMS in conducting research projects; vi) to contribute to teaching program for candidates appearing for IBLM examinations in subsequent years

## About “Indian Society of Lifestyle Medicine”

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**Member Interest Group-IT-Communication, Social media & Networking:** The office bearers are: Dr. Shalini (Director), Dr. Prapthi (Chair).

The mandates of this MIG are: i) To support all other MIG's with social media promotions; ii) To create & maintain ISLM website; iii) To support ISLM in all IT related issues; iv) To collaborate with IT industries for promoting the growth of ISLM footprint.

**Member Interest Group-Alliance Advocacy & Membership:** The office bearers are: Dr. Rajeena Shahin (Director), Dr. Pratima Kini (Chair), Dr. Priyanka Udawat (Co-Chair) & Dr. Arun Kumar Nanda (Core Committee Leader).

The mandates of this MIG are: i) Facilitating ISLM membership: the ISLM has 150 active members so far; ii) Institutional collaborations; iii) creating awareness about ISLM in medical fraternity through talks & webinars; iv) Creating awareness in the community about principles & practice of healthy lifestyle; v) Facilitating alliances with Industry and allied organizations & sectors.

**Member Interest Group-Clinical services:** The office bearers are: Dr. Smitha Nambiar (Director), Dr. Khalid Khader (Chair), Dr. Smitha Jain (Co-Chair) & Dr. Ishani Hanspal (Core Committee Leader).

The mandates of this MIG are: i) To draft evidence-based guidelines on logistics to establish Lifestyle Medicine practice in clinical hospital/ workplace; ii) To create a database of various medical devices & apps that can be incorporated to monitor LM pillars; iii) To conduct a survey of all ISLM members regarding the protocols & use of various medical devices and apps and prepare evidence based guidelines for their use; iv) To collaborate with technology based organizations for integration of Telemedicine for Lifestyle Medicine practice; v) To collaborate with technology based organizations to create Lifestyle Medicine Integrated Electronic Health Record

**Member Interest Group-Health Promotions:** The office bearers are: Dr. Anupama Devdas (Director), Dr. Veenu Sharma (Chair), Dr. Pooja Manoj (Core Committee leader)

This MIG is a dynamic group of individuals who came together to create health programs which are evidence based, interesting, health promoting, community based & in sync with the core concepts of Lifestyle Medicine.

Health promotion group aims to enable people to increase control over the negative lifestyle influences and to improve their health and prevent diseases by bringing a positive change in health behaviors as a whole through health communication, participation and education as its cornerstones. Over the last few years, the curative model of health care has begun a subtle shift towards a participatory model of health promotion emphasizing upon practice of healthy lifestyles and creating healthy communities.

## Key Activities of ISLM

### International Conference of Indian Society of Lifestyle Medicine November 27<sup>th</sup> and 28<sup>th</sup>, 2021

The ISLM Virtual Conference was held on 27<sup>th</sup> and 28<sup>th</sup> November 2021. It was well attended by around 700 delegates. Dr Ravinder Mamtani (Vice Dean for Population Health and Lifestyle Medicine, Weil Cornell Medicine, Qatar) gave the Keynote address which highlighted the need and relevance of Lifestyle Medicine. The event was an educational feast with distinguished National and International faculty, many of whom were recipients of prestigious awards like Padma Bhushan and Padma Shri. Some of the distinguished national speakers were: Dr V Mohan, Dr Shiv Sarin, Dr Brij Makkar, Dr Shashank Joshi, Dr Shekhar Shashadri, Dr Sanjay Wadhwa, Dr Naval Vikram, Dr Jugal Kishore, Dr Prabhakaran, Dr Rupinder Sekhon, Dr Sunil Shroff and speakers from AIIMS and many more. Some of the International faculty members were: Dr Edward Philips, Dr Koushik Reddy, Dr Pankaj Vij, Dr Wayne Dysinger, Dr's Ayesha and Dean Sherzai, Dr Param Dehiya and Dr Nitu Bajekal.

Contemporary topics like Telemedicine and digital health were also discussed.

Mr. Stephan Herzog (Executive Director, International Board of Lifestyle Medicine) delivered a talk on "Lifestyle Medicine Certification".

Two Workshops were conducted on "Stress Management" and "Culinary Medicine" respectively, by renowned national & international experts and were well appreciated.

Panel discussions on Lifestyle related issues in Paediatric age group, with Dr Rekha Harish, Dr V Balaguru, Dr Anju Virmani and Mrs Vineeta Mittal, gave an insightful perspective on this specialized area.

Scientific abstracts were evaluated by the scientific committee and best abstracts were awarded certificates of merit.

The concluding session was a Panel Discussion on experience and practical aspects of Lifestyle Medicine practice in various settings, highlighting the benefits and challenges of LM practice models.

The networking sessions provided a valuable opportunity for delegates to interact.

**Forthcoming 3<sup>rd</sup> ISLM International Conference : 5<sup>th</sup>-6<sup>th</sup> November, 2022**  
**Watch out for more details in the coming weeks!!**



**Contributed by: Dr. Anjali Nakra, Secretary, ISLM**

## Key Activities of ISLM

**“Virtual Walkathon”:** 25<sup>th</sup>-27<sup>th</sup> March 2022  
Dr. Anupama Devdas (Director, MIG-Health Promotions)

“MIG-Health Promotions” has successfully completed the first ever health program by ISLM - March to health - Virtual Walkathon on 25, 26 & 27th March. We had 180 registrations and people across the country walked in support and recognition of the event. The aim was to stress upon the importance of physical activity and people could choose the distance they covered over a span of 3 days. Some shared pictures that were used to promote ISLM on various media platforms.

**“Lifestyle Medicine Week: May 29-June 4, 2022**  
Dr. Lakshmi Sundar (Director, MIG-Education & Ethics)

LM week is a global celebration organized between May 29 and June 4 this year. The celebration is all about creating public awareness campaigns on how the health choices we make can have an impact on chronic disease burden.

The celebration, every year, revolves around the 6 pillars of lifestyle medicine - nutrition, exercise, sleep, stress reduction, substance abuse and social connection.

**Nutrition** is a very important pillar of lifestyle medicine. There is enough evidence to show that a whole food plant based diet has the ability to prevent, treat and in some cases even reverse lifestyle diseases. In a whole food plant based diet, the food groups that are included are whole grains, legumes, fruits, vegetables and small amounts of nuts and seeds. Processed food is kept to a minimum. The challenge lies in cooking without oil. Through *“Eat your way to Good Health”* we had a master chef empowering us to learn to cook without oil and using whole grains (May 29, 2022; 5-6 PM)

**Mindfulness** refers to calmly attending to the flow of all stimuli without further thought, judgement and analysis. One of the significant benefits of mindfulness is stress reduction and we had Dr. Anjali Nakra showing us the way. This was a live session to practice Mindfulness and feel its impact (June 1, 2022; 6-6:30 PM)

**Exercise** is another very important pillar of lifestyle medicine.

We have had 2 activities - Zumba and “Strength training for beginners”

**Zumba** is a fitness party with a contagious blend of Latin and international rhythms that provide a fun and effective workout to a global community. People with any fitness level can Zumba. This fun filled Zumba session was led by Dr. Pooja (June 5, 2022: 6:30-7:30 AM)

**Strength Training for beginners** was a very useful practical session led by Dr. Sheela Nambiar, a national expert in this arena (June 4, 2022: 7:30 AM)

Also follow us @lifestylemedicineindia for informative graphics.

To know more and to participate in these activities please contact [support@islm.org.in](mailto:support@islm.org.in)





## Lifestyle Medicine: A clinical solution to health problems of the 21st Century

Dr. Ravi Modali

### *Key to abbreviations:*

NHM: National Health Mission, India; LRNCD: Lifestyle Related Non-Communicable Diseases; ACLM: American College of Lifestyle Medicine; ILO: International Labour Organization; GoI: Government of India; BoG: Board of Governors, National Medical Council, India

Lifestyle, a vital determinant of personal health and several diseases, is a set of personal choices, practices, behaviours & responses that reflect an individual's beliefs and values. India's national health mission recognizes the country's rapid health transition with a rising burden of Lifestyle Related Non-Communicable Diseases (LRNCD) surpassing the burden of communicable diseases like water-borne or vector borne diseases, TB, HIV, COVID19, etc. The LRNCDs like Cardiovascular diseases, Cancer, Chronic Respiratory Diseases, Diabetes, etc. are estimated to account for around 60% of all deaths. LRNCDs cause considerable loss in potentially productive years of life that are otherwise preventable. Losses due to premature deaths related to heart diseases, stroke and diabetes are also projected to increase over the years.

*ACLM explains Lifestyle Medicine as the therapeutic use of evidence-based lifestyle interventions to treat and prevent LRNCDs in a clinical setting. Under medical guidance, lifestyle treatments empower individuals with the knowledge, life skills, health trackers to make effective behaviour changes that address the underlying causes of LRNCDs.*



In the conventional medicine, the clinician assesses the patient's symptoms and signs, makes a bio-medical diagnosis & directs treatment based on medicines and/or surgeries in dedicated care facilities. With added competencies in lifestyle medicine the same clinician can further address the underlying lifestyle causes by promoting wise behaviours, prescribing lifestyles changes, guiding, motivating, and supporting self-care. Promoting self-care among patients opens avenues to sustain continued care beyond hospitals at their homes, workplaces and even during travel. Further, Board Certified Lifestyle Physicians gain expertise to conduct lifestyle treatments as first line of care and also prescribe intensive lifestyle treatment programs especially for LRNCDs.

## Lifestyle Medicine: A clinical solution to health problems of the 21st Century

Lifestyle Medical Care Teams become relevant to deliver the prescribed lifestyle treatment plans that typically run over months to even years as felt clinically appropriate. The lifestyle medical care process is typically multi-disciplinary & may constitute a mix of Licensed Clinical Specialists supported by Registered Nurses, Dietitians, Physiotherapists, Clinical Psychologists, and similar such licensed professionals.

*With Lifestyle Medicine many more disease variables become modifiable that too in a dose-response relationship. Such therapeutic interventions involve health parameters like nutrition, physical activity, body mass, sleep, mental well-being, stress, risky substance use, positive psychology among many more others.*



This aligns well to the NHM's agenda of Health promotion through behaviour change, positive lifestyles & population-based screening of LRNCDs in partnership with community, civil society, community-based organizations, local business entities, insurers, self-funded health schemes, media, etc.

In reference to ILO guidelines, most employers in India recognize the socio-economic value of healthy lifestyle interventions at workplace where: i) workers have access to nutritious, safe, and affordable food, an adequate meal break and decent conditions of eating; ii) fit and healthy workforce who experience less absenteeism, more productivity and higher morale while at work; iii) promotion of tobacco-free workplaces; iv) value of proactively attending and reversing lifestyle related health concerns among workers including; a) sleep-deprivation that increases risk of accidents & adverse incidences attributable to fatigue, lowered emotional resilience, greater irritability and also increased obesity and higher risk of hypertension and cardiovascular diseases; b) working relationships and workplace stress, gender conflict and violence; c) drug and alcohol abuse

Management of LRNCDs are envisaged through setting up of basic or specialized NCD clinics for preventive treatments, early diagnosis, follow-ups and disease management programs for Diabetes, HT, Cardiac Rehabilitation, Dyslipidaemias, Cancer prevention & rehabilitation, Obesity, NAFLD, Arthritis, Asthma, COPD, Irritable Bowel Syndrome, PCOS, Stress, Anxiety, Alcohol use disorder, habitual use of tobacco, Renal disease, Stroke, etc.

Summarizing all the above, Lifestyle medicine is a transformative medical subject with rising adoption among clinicians in various mainstream disciplines like general practitioners, general physicians, cardiologists, gynaecologists, obstetricians, endocrinologists, paediatricians, geriatricians, anaesthetists, preventive medicine specialists, community medicine specialists and many more.

## Lifestyle Medicine: A clinical solution to health problems of the 21st Century

In recognition of this transformative phase of health system in India, amidst overwhelming challenges in health and care systems, the GoI recognizes digital health as a critical enabler. On 25th March 2020, the BoG in partnership with NITI Ayog prepared & released the Telemedicine Practice Guidelines for Licensed Medical Practitioners. These guidelines provision for the appropriate use of telehealth to deliver and facilitate health and health-related services including medical care, provider and patient education, health information services and self-care via telecommunications and digital communication technologies. The core aim is to advance health of clinicians, individual patients, and communities by appropriately addressing the rising burden of preventable harm & diseases including LRNCDs. Lifestyle treatment programs & health improvement programs target providing timely and best possible care in a healthy therapeutic relationship over a period. Adoption of telehealth enabled management information system seamlessly connects the medical team with its patient population thereby making healthcare system efficient and better oriented to health outcomes.

*ISLM in its mission to lead a transformative culture of health and wellbeing for humanity is driving this movement in India and invites proposals of mutual interest in realizing healthy outcomes towards the universal sustainable development goals.*

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**Author: Dr. Ravi Modali. Executive Board Member & Treasurer, ISLM.**



## Lifestyle and its Medicine

Dr. Rabbanie Tariq

### Background:

According to World Health Organization Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally.

*Each year, more than 15 million people die from a NCD between the ages of 30 and 69 years. Seventy seven percent of all NCD deaths are in low- and middle-income countries. The most common NCD is cardiovascular disease, which kills 17.9 million people/year, followed by cancer (9.3 million), respiratory disorders (4.1 million), and diabetes (1.5 million). Over 80% of all premature NCD fatalities are caused by these four disease types.*

*Tobacco use, physical inactivity, harmful alcohol use, and unhealthy diets are all linked to an increased risk of dying from an NCD.*



Screening, detection, lifestyle modification treatment as well as palliative care of NCDs, are key components of the response to NCDs. The Asian continent has no less contribution to these numbers. Globally, NCD deaths were projected to increase by 15% between 2010 and 2020 (to 44 million deaths) with an estimated 10.4 million deaths in South-East Asia alone. Of particular concern is the high level of premature mortality from NCDs (deaths before 70 years of age) in several low- and middle-income countries (LMIC). Further, India which is the seventh-largest country as well as world's seventh-largest economy, also contributes a high proportion of NCD's to global numbers.

*According to the study report "India: Health of the Nation's States"- The India State-Level Disease Burden Initiative in 2017 by Indian Council of Medical Research (ICMR), it is estimated that the proportion of deaths due to NCDs in India have increased from 37.9% in 1990 to 61.8% in 2016. While the country has become self-sufficient in agricultural production and is one of the top industrialized countries in the world, the modernization and acculturation has acted as perpetuator to the prevalence of NCD's.*

*India accounts for a relatively large share of the world's disease burden and is undergoing an epidemiological transition that the lifestyle diseases dominate over communicable diseases in the total disease burden of the country.*

Health services have improved to a great extent which have contributed to increase in life expectancy as well as the chronic diseases. With such higher proportions and increasing chronic disease trends, a strong health policy and innovative approaches need to be adopted globally as well as nationally.

In a recent report of India Council of Medical Research (ICMR), titled "India: Health of the Nation's States", disease burden from NCD's increased from 30 per cent to 55 per cent. The epidemiological transition, however, varies widely among Indian states: 48% to 75% for NCD's, 14% to 43% for infectious and associated diseases, and 9% to 14% for injuries. Ghaffar et al found out that mortality, morbidity, and disability attributable to the major NCD's account for about 60% of all deaths and 47% of the global burden of disease; these rates are expected to rise. Sedentary lifestyles, excessive poverty, and insufficient health systems are all obstacles to treating the NCD epidemic in South Asia.

*Diabetes has been a problem in Asia and specifically in countries like India & China for decades-at one time an urban disease, diversified under the pressure of developments into various ecotypes. Both the prevalence and incidence due to diabetes and other NCDs had gone up over the years. For effective implementation of various chronic disease control strategies, the focus of the health policies is to roll out decentralized programs in the best possible way.*



The frameworks of various health programs operate in a bid to optimize scarce resources and to ensure long term sustainability of these interventions.

Manpower for health services has been described as the "heart of the health system in any country". It is one of the most critical components of healthcare systems & policies. With the existing policies, the humankind is still facing the increasing trend of NCD's which ultimately is overburdening the healthcare services at all levels.

*With the epidemiological transition taking place all over the globe and evolution of lifestyle of all classes, chronic diseases have had an upsurge. By 2020, the World Health Organization predicted that two-thirds of all disease worldwide will be the result of lifestyle choices.*



*Across the planet, the health care has been overburdened. The policy makers, agencies like WHO are stuck amidst the fiasco of countries of diverse economies wherein on one side, the communicable diseases are making their way with outbreaks and on the other hand, the developed as well as the developing countries are facing a double-edged sword of both the infectious and chronic diseases.*



*An innovative and dynamic approach is the need of the hour, which would not only match the speed of socio-epidemiological progression of chronic diseases but also address the root cause of diseases, thereby tapering the source as well as the disproportion of incidence and prevalence of chronic diseases.*

### Role of Lifestyle Medicine

Lifestyle Medicine (LM) a sub-specialization of modern medicine, has been one of the fastest growing concepts in medical history. According to the textbook of Lifestyle Medicine (1998), LM is defined as "the discipline of studying how daily habits and practices impact both on the prevention and treatment of disease, often in conjunction with pharmaceutical or surgical therapy, to provide an important adjunct to overall health". An overwhelming body of scientific and medical literature supports the concept that daily habits and actions exert an enormous impact on short-term and long-term health and quality of life and this is where LM has its role defined. However, LM per se, with its inception needs revolutionary approach so as to cater to the unmet and unrealized demands of populations of different socio-cultural environments. Since the beneficiaries of LM haven't realized its potential of benefit in reduction in disease burden and improving healthcare, it still faces operational difficulties especially in financially successful models.

*The importance of Lifestyle Medicine practice needs to be advertised at the regional as well as global level. The International Board of Lifestyle Medicine has made remarkable efforts to set the bar of Lifestyle Medicine competencies and a standard for initiation of this rapidly evolving science.*

With number of organizations like the Lifestyle Medicine Global Alliance, the American College of Lifestyle Medicine, the Indian Society of Lifestyle Medicine who have been advocating the cause of lifestyle medicine at all levels, the collaborative, concurrent, & multimodal reinforcements need to be executed. The latest resources, webinars, discussions, grand rounds, social media promotions, core working groups and directions to streamline improvements in this science have already been operationalized. We must thank all the stakeholders for spreading awareness with regard to lifestyle diseases and its cure.

*All the organizations including Indian Society of Lifestyle Medicine and their members have been playing an impressive role to advocate the cause of LM. With the advent of Diplomate Certification from International Board of Lifestyle Medicine in India too, we are hopeful to have more physicians & professionals with upgraded core competency skills.*



However, there is always a room for improvement and undeniably some stones are still left unturned. The global LM bodies need to prioritize improvement in awareness generation through steps taken at global, national and regional levels.

*A strong political will, advocacy with global health agencies and governments is the need of the hour. Robust research in the field of lifestyle medicine needs to be encouraged conceptually, with grants for multicentric centric studies across countries concurrently.*

For this, the regional bodies need to come together and chalk out an organizational plan to strengthen the already existing mechanisms of reducing the burden of NCD's through LM approach. Projects at global level should be taken by organizations from diverse nations to substantiate scientific evidence supporting LM. The multicentric studies, having more validity, can augment the scope of LM.

The vision of changing the US environment to a “blue zone” may be extended to other regions as well. As Dr Katz mentions, healthy lifestyle cultures need to be promoted further in poor lifestyle societies. Health promotional cultures like open health parks, gyms, health clubs need to be part of our lives. A strong advocacy to the concerned stakeholders is demanded to make this possible. Some more areas like the health & fitness clubs too need to be incorporated in LM. Hitherto, fitness clubs usually don't have a specialist in LM. The LM professionals have a broad scope in this domain wherein physical activity, nutritional aspects/dietetics can be promoted. An approach of a team working at health clubs involving a LM specialist, physiotherapist, a fitness trainer and a dietician can help to bring LM at new scale all over the globe.

According to Markets and Markets, the global market for medical wearable devices was projected to reach \$12.1 billion by 2021, with the US being the largest market. The use of LM technology is the next big thing which can contribute to LM boom. The use of Health care related applications on smart phones, wearable devices, cloud services and artificial intelligence would contribute to build the future of LM. We need to come together and develop the inter sectoral coordination mechanisms to make this possible.

*I reckon, lifestyle medicine isn't about the patients visiting the clinics, it is more than that. It is the way every moment of our lifestyle is spent, which actually counts. LM is the present and it's the ray of hope to improve the future. A strong foundation of LM has been laid, it's time to build more and benefit the mankind to the supreme extent it warrants. The future will witness lifestyle medicine era and we are heading towards it.*



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# Burnout: The New Frontier in Occupational Health

Dr. Venkat Srinivasan

**Abstract:** The WHO defines burnout as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed." The prevalence of burnout in society has burgeoned today, leading some to call it an epidemic. The three dimensions of burnout as outlined by Christina Maslach are emotional exhaustion, loss of sense of accomplishment, and cynicism. While burnout and depression share some common features like exhaustion, loss of sense of accomplishment, the two syndromes are distinct. The sources of burnout in the workplace include work overload, lack of control, insufficient reward, unfairness in the system, breakdown of community, and value conflict. Theoretical constructs of cognitive dissonance, emotional dissonance, and compassion fatigue have also been researched as sources of burnout. Burnout adversely impacts the physical and emotional health of workers. Organizations bear significant costs, both directly and indirectly, due to burnout. There is currently an urgent need for validated interventions to minimize the burden of burnout.

## Introduction:

The term burnout, ever since it was coined in the [1970s by Herbert Freudenberger](#) to refer to workplace stress, has become a popular term in the public vernacular. In recent years, the reported prevalence of burnout has burgeoned, leading some to call it an [epidemic](#). Physicians, nurses, and healthcare workers are uniquely more susceptible to this syndrome due to the nature of their occupation. Despite ongoing efforts to tackle this modern-day epidemic, effective and proven solutions continue to be elusive. This article will attempt to define burnout, identify causes, and explore the impact of burnout on individuals and organizations.

## Definition

Freudenberger defined burnout as... "becoming exhausted by making excessive demands on energy, strength, or resources in the workplace." This definition, describing burnout from a patient's point of view, integrates symptoms and etiology (job strain). This helped differentiate burnout from other psychiatric disorders.

*The [WHO defines burnout](#) as "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: feelings of energy depletion or exhaustion; increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and reduced professional efficacy. Burn-out refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life."*





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We shall discuss the three dimensions later. The other key elements to note in this definition include the word "syndrome", or a collection of symptoms, "conceptualized" indicating that it is still an evolving construct and the word "phenomena" implying that it is perhaps inevitable, although efforts can be taken to mitigate its effect.

### **Three dimensions of burnout:**

*Christina Maslach's seminal work has led to the identification of the three dimensions of burnout.*

*These are: i) Emotional exhaustion: a sense of fatigue, loss of energy, emotionally overextended. This can be understood as a chronic stress response; ii) Loss of accomplishment: feeling worthless, ineffective, and a sense of failure; iii) Depersonalization: Cynicism, callousness*



The Maslach Burnout Inventory (MBI) rates the response of the subject to questions on these three dimensions on a scale of 1-7. Based on the responses, [employees can be split into the following five categories](#): i) *Burnout*: high on exhaustion, high on cynicism, low professional efficacy; ii) *Disengaged*: High score on depersonalization resulting in cynicism. Employees tend to be unmotivated, disengaged and exhibit the phenomenon of "presenteeism."; iii) *Overextended*: Primarily scoring high on exhaustion. The employee tends to be tired, fatigued, exhausted. Frequent absence from work might be a resultant effect; iv) *Ineffective*: High negative score in loss of accomplishment. This results in the workers not feeling good about themselves. It is key to remember that this is not an external analysis of the efficiency of a worker, but the internal feeling of the subject; v) *Engagement*: This would be the worker who does not score high on any of the three axes defined above.

Maslach cautions that the MBI is [a research tool](#) to investigate the predisposing condition in the work environment leading to burnout and not a diagnostic measure to identify patients, although, [quite often the distinction is lost](#).

### **Burnout and depression**

Depression is a psychiatric disorder with strict diagnostic criteria; burnout, on the contrary, is an occupational phenomenon, as we saw above. While researchers and the WHO strive to emphasize the distinction between burnout and depression, there is considerable overlap between the symptoms of burnout and clinical depression. Psychomotor retardation, tiredness/ fatigue, and a sense of worthlessness/ guilt are all part of the [DSM-5 criterion](#) for diagnosis of depression. From the perspective of the individual patient and the treating physician, the difference may be blurred, and interventions may have to take into consideration, workplace stress as part of the psychosocial milieu of the patient.

## Burnout prevalence

Most prevalence statistics on burnout are based on self-reported answers to surveys and questionnaires. [In a survey](#) by Deloitte of 1000, full-time US professionals, 77% of respondents reported having experienced burnout at their job. The annual [Medscape Physician Burnout & Depression Report 2022](#) found that the prevalence of burnout amongst physicians in the United States had increased to 47% from the previous year's value of 42%. However, studies estimating the prevalence of burnout have shown substantial variability. [A systematic research](#) that analyzed 182 studies found the reported prevalence of burnout amongst physicians between 0 and 80%. The authors, therefore, pointed out the need for developing a consensus definition of burnout and of standardizing measurement tools to assess the effects of chronic occupational stress on physicians. Albeit the National Academy of Medicine in its [consensus study](#) reported that between 35 percent and 54 percent of U.S. nurses and physicians have substantial symptoms of burnout, and the range for medical students and residents is between 45 percent and 60 percent.

### *Sources of burnout:*

*Christina Maslach identifies the following six factors in a work-environment as sources of burnout: i) Work overload; ii) Lack of control; iii) Insufficient reward; iv) Breakdown of community; v) Unfairness in the system; vi) Value conflict*

## Work overload

Work overload is a [key driver of burnout](#). Christina Maslach defines the modern workplace as having the following three characteristics: i) More intense; ii) More time; iii) More complex.

The trend of digital work from remote locations, accelerated by the recent COVID-19 pandemic, has accentuated the problem of work overload. [A recent global survey of remote/ hybrid employees conducted by Microsoft](#) revealed that 54% of respondents felt overworked and 39% felt exhausted.



In Japan, the term *karoshi* is used to refer to death from overwork. *Karojisatsu* refers to suicide from overwork. In China, the equivalent term for *karoshi* is *Gualaosi*. [The World Health Organization \(WHO\) and the International Labor Organization](#) estimated that in 2016, 745,194 deaths (705,786-784,601) and 23.3 million disability-adjusted life years (22.2-24.4) from ischemic heart disease and stroke combined were attributable to overwork.

## Lack of control

Workers consistently identify loss of control as one of the reasons for their burnout or dissatisfaction at work.

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*Loss of control involves various aspects as enumerated by Christina Maslach: i) Capacity to set priorities for daily work; ii) Select approaches to doing work; iii) Make decisions about the use of resources.*

An employee is not given the freedom to act on problems that they identify or solve them because of the rigidity of the organization. In the Medscape Physician Burnout & Depression Report 2022 "too many bureaucratic tasks" was identified by more than 60% of physicians as the cause of their burnout while loss of autonomy was cited by more than 30% of respondents.

Most creative jobs in organizations are, necessarily, associated with unpredictability. Invariably, they involve collaborating with co-workers. Working as a group necessitates giving up some degree of control. Thus, an organization must strive to strike a balance between the autonomy of its employees and their ability to exercise/ compromise on control.

### **Insufficient reward**

Rewards are multidimensional. Financial returns from a job are unquestionably at the top of any employee's list as an expectation from their job. However, organizations constantly strive to keep their payroll expenses down to stay competitive. There are several other ways that a job can be perceived to be less rewarding. Lack of prestige or recognition, job security, and opportunities to ascend the corporate ladder all fit into this category. [A study of HIV/AIDS volunteers](#) from Australia found that non-material rewards, received as gratitude from clients as also recognition and support from management positively influenced the organizational work environment.

### **Breakdown of community**

Interactions between individuals are invariable in most workplaces. A loss of trust and cohesiveness undermines teamwork. This breakdown of community manifests as interpersonal conflicts, declining mutual support, and respect among the members. Employees can feel isolated as a result.

A [cross-sectional questionnaire survey](#) of health and welfare professionals working in Community Comprehensive Support Centers in Japan conducted in 2015 explored the correlation between what the authors described as social capital and workplace burnout.

*The respondents were asked to rate the following aspects of their jobs on a Likert scale of 1 to 7: i) The workplace has a positive and friendly atmosphere; ii) The workplace is cohesive; iii) Communication among the members at the workplace is smooth; iv) The members at the workplace can discuss and exchange their opinions actively; v) The members can consult with their colleagues about their daily business; vi) The members at the workplace help each other in a busy time.*

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Apart from this, the participants were asked their perceptions of the social capital of the community residents that they were taking care of using these five items: i) The residents are cohesive; ii) The residents trust each other; iii) The residents greet each other; iv) The residents usually help each other; v) The residents frequently interact with their neighbours.

*The authors concluded that working in organizations and communities with higher social capital is related to lower employee burnout.*

### **Absence of fairness**

This concept is closely related to the previously noted "Insufficient reward," but not identical. The entire organization may feel that the compensation is inadequate. However, heartburn can be caused by a system that is perceived to be unfair in the way material compensations as also other nonmaterial rewards are distributed. Extravagant CEO salaries in the face of pay cuts to the staff are a breeding ground of dissatisfaction and burnout. A [survey of physicians in the United States](#) identified that the perception of the respondents that their pay was fair was correlated with higher job satisfaction, lower likelihood of quitting work and a sense of better overall health.

### **Conflicting values**

Organizational ownerships, missions, strategies, and practices change over time. At any given time, conflicts are bound to occur between the core values of the employees and the company that they work for. Workers find inconsistencies between their beliefs and their expected behaviour.

### **Cognitive dissonance**

Leon Festinger's [Cognitive dissonance theory](#) is an excellent paradigm that underscores how humans respond to this struggle between two incompatible value systems. Conflicting values are termed "dissonant" while aligned values are referred to as being "consonant". Many employees, when faced with this dilemma, end up quitting.

Those who decide to stay behind are then left with the following choices to reduce this value conflict): i) Removing dissonant cognitions: Changing one's belief system that conflicts with the expected behaviour; ii) Adding new consonant cognitions: Adding new value positions or thoughts that would justify the behaviour; iii) Reducing the importance of dissonant cognition (internal value of the employee) to reduce mental conflict; iv) Increasing the importance of consonant cognition: Emphasizing the value of the new behaviour/ value.

*Working with a festering, unresolved value conflict is one more source of burnout.*

### **Emotional dissonance**

Health and social workers and those employed in service industries are often called upon to activate or suppress emotions that may be against what they truly feel. *This conflict between felt and expressed emotions is referred to as emotional dissonance.* Effort must be expended by the worker to increase, maintain, or decrease one component of an emotion. This emotional work strains the mental resources of the worker leading to mental fatigue and exhaustion. Thus, emotional dissonance has been identified as a key driver of burnout, as also employee health, especially in the people-facing industries.

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### Compassion fatigue

People working with victims of trauma can be affected by the emotional pain and/or physical distress of those being helped. This emotional load is referred to as secondary traumatic stress (STS) for the caregiver. Workers in the healthcare field, especially emergency medical personnel, physicians, nurses, and social workers are uniquely exposed and predisposed to STS. Overload of STS can result in a state of emotional and physical exhaustion in the caregivers. The term [Compassion fatigue \(CF\)](#) was coined to describe this phenomenon.

*The most used definition of CF is "a state of exhaustion and dysfunction biologically, psychologically, and socially as a result of prolonged exposure to compassion stress and all it invokes."*

CF manifests as exhaustion, anger and irritability, negative coping behaviours including alcohol and drug abuse, reduced ability to feel sympathy and empathy, a diminished sense of enjoyment or satisfaction with work, increased absenteeism, and an impaired ability to make decisions and care for patients and/or clients. Thus, there is a change in the empathetic ability of the caregiver in reaction to the prolonged and overwhelming stress of caregiving. Thus, stress of caregiving can lead to CF too, even in the absence of STS.

### Consequences of burnout

The WHO defines burnout as a phenomenon; this almost lends it a sense of inevitability. Left untreated, burnout can adversely affect the physical/ emotional health of the employees and burden the organization with direct and indirect costs.

*[Health outcomes attributed to burnout include:](#) i) Obesity; ii) Type 2 Diabetes Mellitus; iii) Insomnia; iv) Metabolic syndrome; v) Coronary heart disease; vi) Musculoskeletal injuries; vii) Mortality at less than 45 years of age; viii) Depression; ix) Substance abuse/ alcoholism*

The healthcare cost of burnout has been projected to be between \$125 billion and \$190 billion every year in the United States.

Burnout often leads to disengaged employees, who cost their employers 34% of their annual salary as a result. Between 20% and 50% of employee turnover has been attributed to burnout. Tait Shanafelt, one of the foremost researchers in the field of physician burnout estimates that the [United States incurs a cost of \\$4.6 billion](#) related to physician turnover and reduced clinical hours.

*[Organizational consequences of burnout include:](#) i) Job dissatisfaction; ii) Absenteeism; iii) New disability pension claims; iv) Job demands/resources; v) Presenteeism (decreased engagement and productivity); vi) Decreased quality of work; vii) Errors; viii) Risk for litigation*

## Burnout: The New Frontier in Occupational Health

### Interventions

It is beyond the scope of this article to review intervention strategies to tackle burnout. In broad terms, efforts to tackle burnout can be classified as either focusing on the individual suffering burnout or system-side implementation of organizational strategies.

*It is imperative to recognize that burnout is primarily an occupational phenomenon and emphasizing individual resilience-building would yield only minimal results.*

### Conclusion

It has been almost a half-century since the word burnout was coined. Extensive research has shed light on the prevalence of burnout, the underlying causes, and associated costs.

*While there might still be ambiguity on the exact figures, the significance of burnout as an adverse outcome of workplace stress is indisputable. The WHO definition of burnout has shifted burnout away from a disease-cure paradigm to placing the burden on the organization to ensure a healthy workplace.*

The need for the hour is research on interventional strategies founded on sound principles that can alleviate the burden of this modern-day, occupational hazard.

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## Case study

# Remission of Type 2 Diabetes Mellitus in a young Indian male

Dr. Laxmi Sundar

**Abstract:** A 33 year old male presented with Type 2 Diabetes Mellitus, dyslipidaemia and chronic insomnia. He was on a diet high on animal protein and saturated fat. He was willing to make lifestyle changes. With a properly structured and phased out nutritional and physical activity plan, he brought down his HbA1c and lipid profile.

### Case details:

*History:* A 33 years, male from India presented with frequent urinary tract infections. His father was a known case of T2 Diabetes Mellitus. Screening investigations had revealed high HbA1c and abnormal lipid profile. He was on no medication.

*Physical examination:* His biometrics at presentation were as follows: height: 165 cms, weight: 67.5 kgs, waist circumference: 39 inches, BMI: 24.8

General physical examination and systemic examination were within normal limits

*Lifestyle vital sign assessment at presentation:* His dietary assessment revealed excess consumption of processed food, meat & dairy. He was largely sedentary with no structured leisure time physical activity. Sleep assessment revealed inadequate sleep averaging to 4 hours per day. He did not consume alcohol or tobacco & stress assessment score was not significant.

*Laboratory reports at presentation:* Fasting blood sugar: 300 mg/dl, Post prandial blood sugar: 368 mg/dl, HbA1c: 8.8; Total cholesterol: 223 mg/dl, HDL: 33mg/dl; LDL: 103 mg/dl; Triglycerides: 728 mg/dl

**Diagnosis at presentation:** His medical diagnosis at presentation was Type 2 Diabetes Mellitus and Dyslipidemia. Lifestyle predisposing factors identified were: poor nutritional habits, sedentary lifestyle and chronic insomnia

### Lifestyle Intervention:

*Stage of change & Behavioural counselling technique used:* He was in a "Preparation phase" at presentation. We worked as a team with a nutritionist and a physical trainer. We facilitated his transitioning to "Action phase" by "Motivational interviewing".

*He was given guidance on:* i) Food items to be removed from the shelf; ii) Food items to be added to the shelf (grains, legumes, nuts and seeds); iii) Recipes, websites for ordering organic produce, iv) Starting out on an exercise plan, v) Working on lights at the restaurant he owned and home front to cut off blue light.

*Lifestyle intervention on nutrition:* He was given specific goals on a fortnightly basis. He had been contemplating for a while and now was ready with knowledge and action plan to embark on this new journey within a month [1]. He slowly transitioned into a wholefood plant-based lifestyle in a month's time. He consciously added healthy fats, legumes and salads into his meal.

## Remission of Type 2 Diabetes in a young Indian male

*Lifestyle intervention on physical activity:* He led a sedentary lifestyle. He was contemplating regarding exercise. With the help of a coach, we agreed to start him on a twice a week strength training. His target was to achieve 150 minutes of moderate intensity activity and 2 weight training sessions in one week. I explained to him the recommendation per week and planned to achieve this eventually [2] based on the progress he makes. He was motivated enough to get some weights and I, along with a physical trainer explained to him the various muscle groups which need to be exercised a few times a week with a period of rest in between.



*Lifestyle intervention on Sleep:* He had very poor sleep habits & he barely slept for a few hours every night. We set very realistic goals with him. We advanced his sleep time by half an hour every fortnight. We also discussed setting up bedtime routine with him and the importance of early dinner and avoiding blue light and coffee after 3PM [3].

### Outcome:

After 1 year of introducing lifestyle intervention, there was a significant improvement in his biometrics, glycaemic control & lipid profile without introducing any medication.

Table 1 below compares pre-lifestyle intervention parameters with 1-year post lifestyle intervention parameters.

	Wt.	WC	BMI	FBS	HbA1C	TC	HDL	LDL	TG
Pre-LM Intervention	67.5 kg	39 inch	24.8	300	8.8	223	33	103	728
Post-LM intervention	54 kg	32 inch	19.8	100	5.7	158	36	85	145

WC: waist circumference; BMI: Body mass index; FBS: fasting blood sugar; TC: Total cholesterol; TG: Triglycerides



## Remission of Type 2 Diabetes in a young Indian male

More important is the lifestyle behaviour change. The patient understands the importance of whole food plant-based diet and sufficient physical activity. He also knows the value of proper sleep. He is currently in the "Maintenance phase".

### Physician's message & reflections on the case:

This was one of my earliest cases and also a huge learning for me. Here was a young gentleman with Type 2 DM who didn't want to be chronically ill. He was well read and ready to change his lifestyle.

Taking a patient centric approach was something new to me. It felt good to be open, listen to the patient with empathy, and plan and set goals with him. Working as a team with a nutritionist and a physical trainer was also a huge learning for me. The patient is now on his own completely setting goals for himself and reaching out to me to discuss his goals.

I started out as a lifestyle medicine practitioner a year back. I have been in the field of "diabetic foot" for more than 2 decades practicing conventional medicine. The approach had always been doctor centric with patients doing what they are told. As I read more about chronic disease reversal and prevention and having experienced an injury free life as a runner on a whole food plant-based diet, I realized this was my call.

*To quote Dean Ornish, I am a firm believer that "Genes aren't our destiny".* The past one year has given me immense satisfaction that 30 years as a practitioner of conventional medicine didn't give.

### Patient's reflections:

I was able to understand the root cause of my problems. Simple, step by step changes made to my lifestyle had a huge positive impact on my diabetes getting better. Practically possible diet, exercise and changes to my sleep have helped me drop weight, reduce my cholesterol levels, and bring down my HbA1c to normal.

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# Case study

## Primary prevention - the key to the future of healthcare

Dr. Bhavani V

**Abstract:** Lifestyle has become a major risk factor in the modern era, contributing to increased incidence of non-communicable diseases (NCD's). This case study highlights that addressing risk factors by facilitating healthy sustainable behavioural changes can treat and prevent NCDs.

### Case Details:

*History:* A 34 year old Indian male presented with hypertension and dyslipidaemia diagnosed 5 months ago for which he had been started on medication. He was a commercial director at an MNC and his job demanded frequent air travels and late night calls to accommodate varying time zones. He had been married for 5 years and his wife was a freelance worker. His maternal aunt & grandparents were a known case of diabetes and hypertension.

*Physical examination:* At presentation, his biometrics were as follows: height: 167 cms, weight : 97 kgs, waist circumference: 46 inches , BMI : 34.8 , body fat : 48%

Blood pressure was 132/88. Other vital signs & systemic examination was within normal limits.

*Lifestyle vital sign assessment at presentation:*

*Nutrition:* His dietary assessment suggested that his diet was high in vegetables & grains with occasional poultry intake but, deficient in fruits, seeds, nuts & water intake. Snacks were high in fat & added sugar. Main meals were usually home cooked. However, meal timings were erratic. While travelling, his meals were rich in added sugars, processed meat & grains, and saturated fats like “ready to eat” meals or restaurant foods.

*Physical activity:* He was physically inactive with prolonged hours of sitting. He did not participate in any scheduled physical activity or exercise except for occasional cricket / tennis with colleagues

*Sleep:* Sleep timings were erratic. Average sleep duration on weekdays was 5-6 hours/ day while it was 8-9 hours/day on weekends. Exposure to lights from phone and laptop while in bed resulted in delayed initiation of sleep.

*Tobacco & Alcohol use:* He started smoking at 24 years of age, 0-2 cigarettes/day. He consumed 1-2 drinks / day of Rum; once or twice per week.

*Stress:* Perceived stress level, at presentation, was 2

*Social connectivity:* He was well-adjusted and connected in personal and professional lives with high life satisfaction

*Laboratory reports at presentation:* Total cholesterol: 242 mg/dl; LDL: 136 mg/dl; Triglycerides: 528 mg/dl. Other laboratory parameters were within normal limits.

*Medication history:* T. Rosuvas F OD; Cap. Revital H OD

**Diagnosis at presentation:** His medical diagnosis at presentation was Obesity with Abdominal Adiposity, Pre-Hypertension and Dyslipidaemia. Lifestyle predisposing factors identified were: sedentary behaviour, calorie dense but nutrient poor diet, tobacco (smoke) consumption and chronic sleep deprivation.

### **Lifestyle Intervention:**

*Stage of Change & Behavioural counselling technique used:* At presentation, he was in a "Precontemplation phase" for cessation of tobacco use & change in sleep behaviour, while he was in a "Preparation phase" to make changes in his diet and physical activity.

Mindful active listening and positive psychology-based coaching was used to assist in health behaviour change.

After obtaining informed consent regarding LM interventions, the following were carried out:

*Lifestyle intervention on Nutrition:* A food log/diary for 3 days was asked for. We analyzed the eating pattern, quality and quantity of food and time of meals. Patient readiness for change was assessed and he was highly motivated.

*Whole food plant-based diet with low fat, high fiber, variety of fruits and vegetables and restricted sodium intake was introduced.* Importance of restricting saturated fat and trans-fat and replacing it with PUFA and MUFA was explained. The role of fiber rich diet in treating his deranged lipid values was explained. Calorie restriction to 1500-1700/day was suggested. He was introduced to "My Plate" and referred to a Clinical Nutritionist for meal planning.



Although he was consuming vegetables, it was over cooked most of the times. We discussed about taking raw vegetables as far as possible in the form of salads and steam/stir fry vegetables for meals. Non starchy vegetables, greens and cruciferous vegetables were advised to be given priority while shopping.

He was advised to add a variety of fruits 3-5 servings/ day as whole fruits or salad & a smoothie if necessary.

Salt restriction was advised to less than ½ teaspoon/day or a pinch of salt for every meal. He could replace salt with spices like mint, lemongrass for seasoning. Salt intake from other processed food sources were shown. He was equipped to read nutrition labels and to identify the hidden sources of Sodium intake and avoid it.

He was advised to increase fiber in diet by adding seeds (chia/flax/fenugreek seeds) in the form of powder or soaked, at least one legume/ lentil in the meal (sprouted/ boiled/ soup) and leafy greens at least 3 days /week.

## Primary prevention - the key to the future of healthcare

Mindful snacking was introduced. Healthy snacking options were given like carrot and cucumber sticks with hummus/pesto dip, sprouts salad with lime dressing, fruit salad, 2-4 walnuts /almonds and a handful of peanuts.

Whole unprocessed grains were suggested but the patient was reluctant to change. The benefits of adding whole grains was discussed and its nutrient profile was compared with that of processed grains. He reduced the portion of rice to half cup or 1 roti made with whole wheat or multigrain flour (steel cut oats, foxtail and kodo millet).

He went cold turkey on processed packaged foods, bakery goods and dairy.

He was using peanut oil for cooking and olive oil for dressing and stir frying. We discussed the quantity to be used: 1 tablespoon /day of total oil consumption.

His water consumption / day was assessed and he was advised 3 liters of water / day.

A back up plan was made to avoid lapses while he is travelling by focusing on eating more of soups, salad, vegetable stir fries and restricting the portion of grains.

*Lifestyle intervention on Physical Activity:* Physical activity was planned keeping his work schedule and time constraints in mind.

It was prescribed that he starts doing exercise for cardiorespiratory endurance in the form of walking, running, cycling or swimming, of moderate intensity, 30 minutes a day for 5 days a week.

Client was interested in running. It was decided that he would run 3 days a week, for 10 minutes to start with, around a lake trail nearby. He was advised warm up walking for 2-3 minutes followed by running for 7-8 minutes and then cool down walk for a minute followed by stretching exercises. Brisk walking was advised for the other 2 days a week for 30 minutes. He comfortably started running 3 days/week and gradually increased his pace and intensity. He was able to do a 10 km run at an average of 6.10 minute/ kms in the “Maintenance phase”



Prolonged hours of sitting due to work profile were pointed out. He was encouraged to take activity breaks every hour, take 100 to 250 steps around the workstation, do stretches concentrating on the shoulder, back and upper limb muscles and then resume working.

He bought a smart watch to keep track of his activities. By implementing the above-mentioned changes, he increased his step count gradually from 2000 to an average of 7000 steps/day in addition to structured physical activity.

He developed a buddy system with his colleague at office and later when he started work from home, his wife motivated him.

Strength training was initiated. Initially he started with body weight exercises, 8-10 reps, 1 set, 2 days a week aiming at the core, upper and lower limb muscles. In 7-8 weeks, he started strength training 4-5 days a week focusing on one group of muscles/day, with 8-12 reps, 3-4 sets. He started using free weights, Thera bands and medicine ball. A progress chart was maintained and updated.

*Lifestyle intervention for sleep:* Sleep Readiness and confidence assessment was done. It was 2 on a scale of 10. Pamphlets and resources regarding sleep and its necessity was given to him.

During the follow up visit, he was encouraged to make small changes in the form of unwinding an hour before bedtime, avoid watching laptop/iPad an hour before bedtime, keeping his smart phone and devices away from the bedroom. In the following visits, his assessed readiness for change was 3/10.

As he became physically active, his quality of sleep improved. During the following visit, sleep hygiene and influence of light from devices like phone & desktop on sleep were discussed. He was encouraged to set a time to go to bed and wake up.

A sleep log was maintained. A relaxing stroll with his spouse in the garden before bed helped him to unwind. He kept his phone at a table away from bed and in silent mode. Most of the days he maintained his sleep routine.

*Alcohol & Tobacco use:* As he was in the "Precontemplation stage", health and wellness risk of the behaviour was discussed and he was given educational materials regarding the same. Assessment was repeated at various visits.

### **Outcome:**

*Change in Biometrics:* The client lost 17 kgs of body weight in a sustainable healthy way and maintained his weight at 80 kgs. His BP stabilized within normal limits (112/70) as he became physically active and had a nutrient rich food with sodium restriction.

*Change in Laboratory parameters:* His Total cholesterol changed dramatically from 242 to 157 mg/dl, LDL reduced to 92 mg/dl and Triglycerides to 103 mg/dl.

*Medication change:* He stopped Tab. Rosuvas and Revital

*Lifestyle Behaviour change:* Moved from "calorie dense nutrient poor diet" to "nutrient dense diet", with sodium restriction and high fibre. He changed from sedentary behaviour to being physically active sufficiently. He also incorporated a healthy sleep routine.

### **Physicians Message & reflections on the case**

Being a family physician, I have a unique position of power in the health and well-being of families. To use that vantage position in society, to bring about a transformative and healing change is very rewarding.

"Use the power to Empower" is my personal axiom. Practice of lifestyle medicine stands in tune with that. It is gratifying to provide the appropriate tools to the patients/ clients that equip them to take care of their health and well-being.

This client was unique in that he was highly motivated and receptive. He was interested in improving his health rather than managing symptoms. He came as a prepared canvas ready to do his own painting at his own pace. At every stage, he was able to identify the roadblocks and was optimistic about finding solutions. He was also vocal when he felt he was not up for the change (eg: smoking cessation)

My learnings from this case were that being patient centric and respecting the autonomy of patient gives best results. I don't have to take all decisions for my patients. I can facilitate a process that can help them make their own decision. I need not be disheartened when client is not ready to carry out a specific change. To be patient and persistent will yield the results. Again, it is important to be mindful of patient's choices and decisions and respect the same though not necessarily agreeing with it. Teaming up with a nutritionist and incorporating his professional inputs is vital.

**Patient's reflections:** He reported that he feels healthy and energetic. He feels more confident in his body and has a positive body image now. He was thankful to be supported in this journey of building his health. He is now being the agent of change in his circle encouraging them to make lifestyle changes.

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**Author: Dr. Bhavani V**

# Recipe Corner: Vegetable Manchurian With Zoodles

Dr. Laxmi Sundar

Recipe for 3 servings:

Preparation time: 15 min, Cooking time: 15 min

## Ingredients for the Manchurian balls

1. Grated cabbage: 1cup
2. Grated carrot: 1
3. Finely chopped capsicum: ½ cup
4. Cooked millet: 1 cup
5. Green chillies finely chopped: 2
6. Finely chopped ginger and garlic: 1tbsp
7. Steamed and grated potato with skin: 1 cup
8. Pepper powder: 1tsp
9. Salt to taste



**Method for preparing Manchurian balls:** Mix ingredients 1-6. Add salt and pepper powder. Add in the potatoes and mix well. Keep it aside for 10 minutes. Pre heat oven at 180°C for 10 minutes. Roll these into balls and place on a parchment lined baking tray. Bake at 180°C for 15-20 minutes.

## Ingredients for Gravy:

1. Onion: One, medium sized.
2. Garlic: 1 tbsp, finely chopped
3. Ginger: 1tsp, finely chopped.
4. Tomato: One, blend in a mixer
5. Soy sauce: 1tbsp
6. Red chilli sauce (soaked red chillies and soft dates blend together): 2tsp
7. Green chilli sauce (green chillies, dates, apple cider vinegar, blend together)
8. Salt to taste

**Method for preparing gravy:** Sauté ginger and garlic in a pan without oil. Add onions and sauté until translucent. Add soy sauce, red and green chilli sauce and tomato paste. Add water and salt to taste. Cook till raw smell disappears. The consistency can be adjusted to suit your needs.

**Assembling:** Use a spiralizer and make noodles from zucchini. Add gravy on the top. Place Manchurian balls and top it with gravy. Garnish with spring onion.

## Nutritional information per serving:

Ingredients:	16
Energy:	170 Kcal
Protein:	6.87gm
Fat:	1.34 gm
Carbohydrate:	35.69gm

**Contributed by: Dr. Lakshmi Sundar.**

## Book Review:

# Ikigai -The Japanese Secret to a Long and Happy Life

Authors: Hector Garcia and Francesc Miralles

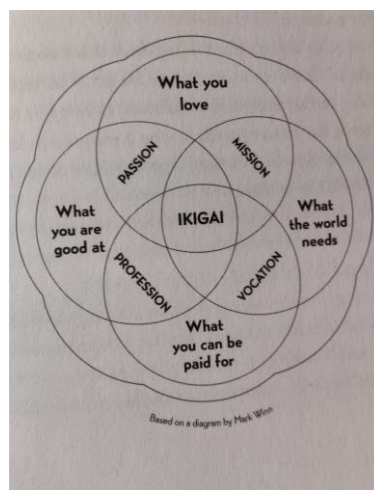
Published By: Penguin Books

Publication Year: 2017

Contributed by: Dr. Nrutya Subramanyam

*The keys to longevity are diet, exercise, finding a purpose in life (an Ikigai), and forming strong social ties*

Hector Garcia Puigcerver, *Ikigai: The Japanese Secret to a Long and Happy Life*



Man has this eternal quest for longevity. We have been intrigued by the concept of eternal youth. There are many tales which showcase our universal aspiration for immortality-be it the churning of the ocean which threw up "Amrit" which granted immortality or the mystic mythic land of Shangri La!

*This book explains the concept of "Ikigai".*

*"Ikigai" is a Japanese concept which translates to the happiness of always being busy.*

The purpose of this book is to help people find their Ikigai, their reason for being.

The authors expertly navigate through various factors which contribute to a long and healthy life, starting from *anti-aging secrets*, *stress* and *mindfulness* to *logotherapy* for mental health, going on to finding your "*Flow*" and then, there are interviews of various centenarians and some super centenarians from Okinawa and other regions of the world.

We are given a glimpse of life in Ogimi which is a small village in Okinawa and is known as the "Village of Longevity".

What is striking about Ogimi is that *everybody is always busy doing something and there is joy in the work they do!*



## Ikigai -The Japanese Secret to a Long and Happy Life

The villagers eat a variety of vegetables, consume little or no sugar, very little salt and have low calorie diets compared to the rest of Japan. *The emphasis is on continuous movement rather than strenuous exercise.*



We are introduced to concepts of Tai Chi, Radio Taiso, Qigong and even Yoga. What is common to all of these forms of exercise/movement is that they are all slow gentle movements combined with an awareness of breathing. *Movement and breath together bring an awareness and mindfulness to our consciousness.*

In the final chapter the authors talk about *resilience* and *antifragility*. We are given an insight into *Stoicism* and *Buddhism* and the concepts of "Wabi Sabi "and "ichi-go ichi-ye". The accent is on living in the present and enjoying the moment, to not dwell on the past or the future. We have to accept the impermanence and the fragility of everything.

*At the same time, we also need to take the opportunity of every adversity to become stronger more robust - aka "antifragile"*

*The authors sum up the ten rules of Ikigai as follows: i) Stay active: don't retire, ii) Take it slow, iii) Don't fill your stomach, iv) Surround yourself with good friends, v) Get in shape for your next birthday, vi) Smile, vii) Reconnect with nature, viii) Give thanks, ix) Live in the moment, x) Follow your Ikigai.*

I read this book when I was preparing for my IBLM exam and I thought it was extremely serendipitous. What I loved about this book is the simplicity with which the authors have given us a guidebook to lead healthier, happier, contented lives.

It is remarkable that Okinawa in spite of being one of the worst hit during WW2 is the first among the Blue Zones of the world. It is a testimony to what a healthy diet, natural movement, being part of a community and being involved in something larger and bigger than oneself can achieve.

To wrap up with a quote from the book:

*"Life is not a problem to be solved. Just remember to have something that keeps you busy doing what you love while being surrounded by the people who love you."*

Go forth read this book and have fun discovering/following your Ikigai!

**Contributed by: Dr. Nrutya Subramanyam**