



Time to Re-Think and Rebuild: Need to Minimize the Pill and Re-Emphasize the Role of Risk Factors Modification in Lifestyle Disorders

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ABSTRACT

An increase of lifestyle diseases has been driven by predominantly four important risk factors viz. unhealthy diet, hazardous alcohol use, tobacco use and physical inactivity. The present paper is envisioned to emphasize personal viewpoints and elucidations about vital role of behavioural risk factors in the management of lifestyle diseases particularly regarding Obesity, Type 2 Diabetes (T2DM) and Hypertension as well as an associated risk of pharmacological measures in treating such illnesses. Type 2 Diabetes is considered as irreversible and incurable chronic disease based on traditional means of management. Though, the current research promotes complete reversal of diabetes with the help of simple lifestyle measures. Health care professionals are encouraged to converse with their patients regarding health benefits of exercise, healthy diet, and other lifestyle measures. Patient centered behaviour involving reducing tobacco use, controlling alcohol consumption, improving sleep patterns, balanced diet and mental wellbeing should be targeted by health care professional. Early diagnosis, prompt initiation of healthy lifestyle measures and delayed drug treatment could be an effective strategy not only to combat LSDs but also to develop positive attitudes towards life.

Key words: Lifestyle Disorders; Diabetes; Hypertension; Workplace based Interventions

INTRODUCTION

Lifestyle diseases (LSDs) include non-communicable ailments (NCDs) which are primarily associated with the way a person or group of people lives. It kills 41 million people annually, equivalent to 71% of all deaths globally.¹ As per World Health Organization (WHO) estimates, cardiovascular diseases account for most NCD deaths, followed by cancers (9.3 million), respiratory diseases (4.1 million), and diabetes (1.5 million).¹

An upsurge of lifestyle diseases has been driven by principally four significant risk factors namely unhealthy diet, hazardous alcohol use, tobacco use and physical inactivity.² Preventive health care by behav-

our or lifestyle modification is less expensive than treating the lifestyle related disease itself. It needs to be proactively practiced rather than reacting when disease has stricken. However, despite the proven advantages of these healthy lifestyle measures, only a limited proportion of people implement it in their life; rather than, the numbers are declining.³ There exists an inadequate public awareness of the correlation between health and lifestyle.⁴

Role of pharmacotherapy in treating LSDs is a debated and even controversial issue. Its persistent use has raised a series of concerns for physicians, patients as well as for health care system in terms of drug expenditures, medication adherence, side ef-

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fects etc.⁵ Despite this, unfortunately, in modern era, pharmacological and surgical interventions are considered as first line and preferred measures over adopting healthy habits and non-pharmacological strategies.

The current paper is intended to present personal viewpoints and interpretations regarding prominent role of behavioural risk factors in the management of lifestyle diseases especially in preference to Obesity, Type 2 Diabetes (T2DM) and Hypertension as well as an associated risk of pharmacological measures in treating such diseases.

Major Lifestyle Diseases and Pharmacological Interventions

Over the past few years, numerous drugs like Thyroxine, Litramine are being used actively to control weight loss in obese patients. However, the studies have indicated serious concerns about its safety and efficacy.⁵ These medications though recommended as an adjunct to diet and exercise modification, they seem to be prescribed as a monotherapy by many. Women on pharmacotherapy and lifestyle modification have lost 10.8% of their body weight at the end of one year, twice as much than those on pharmacotherapy alone.⁶ A comprehensive lifestyle modification programs also reduce the likelihood of developing T2DM by 58% for individuals with impaired glucose tolerance.⁷ Bariatric surgeries and liposuctions which are not just expensive but are also associated with reports of severe complications and mortalities may be reserved for patients with extreme obesity. Obesity is an independent risk factor for coronary heart disease and is also associated with the development of other cardiovascular risk factors, including dyslipidaemia, hypertension, and type 2 diabetes warranting pharmacological intervention.⁸ Several classes of antihypertensive and antidiabetic medication have adverse effects which may interfere with quality of life as well as compliance of patient. Present estimates reveal that around two third of hypertensive patients fail to comply with their therapeutic regimen, making poor adherence as one of the key challenges faced by health care practitioners treating hypertension.⁸

It is imperative to note that, current public health statistics indicates modern epidemics with rise in cases of diabetes, obesity, cancer, and hypertension. These diseases are triggered by multifactorial complex aetiology including lifestyle changes, genetics, social conditions, and complex interactions between them. Pharmacotherapy though powerful in changing the language of biomarkers rapidly, fails to treat the underlying cause of the disease which could be exacerbated due to poor lifestyle-smoking, lack of exercise, bad food choices and stress.⁹ In present situation, no degree of medical advances in drugs, surgeries and other treatments provide complete cure for these health conditions. This is precisely the purpose that a comprehensive approach to health and

wellness is suggested by experts to tackle these health problems.

Pre- Diabetes and Pre-Hypertension: Is There Any Immediate Need to Initiate Drugs?

Despite standard clinical practice guidelines for initiating drug therapy among diabetic and hypertensive patients, many times, its uniform implementation may be lacking, as physician prefers to start medication depending on his clinical judgment and other associated factors without adhering to guidelines. Pre-diabetic and pre-hypertensive stage undoubtedly enhance cardiovascular risk and other complications. However, most patients have low absolute risk and effectivity of prompt drug treatment is uncertain. The desirability of drug treatment for pre-hypertension remains uncertain with lack of evidence and the costs are likely to be high.¹⁰ Though the endpoint if pharmacotherapy in pre diabetic adults is yet to be defined, American Diabetes Association (ADA) have recommended the use of metformin in certain high-risk individuals.¹¹ There is lack of studies relation to long term effect of common medications used for pre-diabetes on growth and pubertal development in children. Greater proportion of young children and adults are developing diabetes due to poor lifestyle. In patients with no evidence of any abnormal cardiovascular parameters and non-modifiable risk factors, minimum 3 months of lifestyle changes should be attempted in the hope that they can be adequately effective to make it needless to use drugs. This fact is also well supported by Dixit JV.¹² However, it may be prudent to start medicines without delay, if blood sugar or blood pressure is not responding to lifestyle modifications.

Workplace Based Interventions

There is compelling evidence supporting the role of work-related stress in augmenting the risk of cardiovascular diseases and diabetes. Various strategies are explored by experts to alleviate occupation related stress. Exercise may be one of the effective components in stress management and can be made mandatory at workplace. 'Exercise in the office' is not novel idea but its implementation in the country like India is very poor in contemporary society. There is sufficient evidence suggesting that exercise during regular working hours improves performance, morale as well as productivity.⁴ The research study at Bristol University has reported that employees who exercise at work are more productive, happy, efficient and calm.¹³ Certain stringent tactics like inclusion of body mass index (BMI) in normal range for contract renewal, ensuring physical fitness during annual performance appraisal, cessation of recruitment for smokers and alcohol drinkers etc. at workplace may be effective to ensure optimum health of employees.

Ambiguity About Diet Plans

There are overwhelming number of existing diet programmes for weight loss, but many of them have been questioned and criticized in terms of its suitability, sustainability as well as its effectiveness. Few diet plans intend to restrict the appetite to limit food intake whereas, others emphasize on curbing carbohydrate or fat in diet. Certain diet programmes claim health benefits which go beyond weight loss. Therefore, selecting the suitable one may prove challenging as there is no one size fits all plan which is appropriate for everyone. There are also potential downsides to some diet programmes like fatigability, nutritional deficiencies, sudden weight loss, headache, psychological stress etc.

Knowing the Difference Between Diet Plan and Lifestyle Change

Research advocates that approximately 80% of dieters who shed a substantial portion of their body fat will not maintain that degree of weight loss for 12 months.¹⁴ One meta-analysis study indicates that dieters regain more than half of weight which they lose within two years.¹⁵ There is clear line of demarcation between lifestyle and diet plan. Lifestyle changes are behaviour modifications in terms of eating tendencies, level of physical activity, sleep patterns, stress alleviation practices, avoidance of addictions etc. which not only provides protection against chronic non-communicable diseases but also encourage positive changes in life. Financial resources, frequent consultations, equipment or machinery, additional nutritional supplements etc. are not required for 'health lifestyle' but it may be applicable for successful implementation of diet plan. To sum up, *good eating practices must be incorporated as a part of regular healthy lifestyle rather than adopting any specific diet plan or programme.* This might be an effective long-term strategy which would keep people in a healthier life.

It must be reiterated that despite the copiousness of information about lifestyle modifications, the credibility is uncertain that enhances our misperceptions. There is scarcity of clear, concise, and easy to understand literature emphasizing today's lifestyle approaches for the Indian population. Multiple terms and terminologies in nutritional science exist which can simply confuse common people and health care professionals too. This could be one of the major obstacles for adopting healthful habits and cultivating healthy behaviour against chronic diseases.

New Developments

Type 2 Diabetes has long been considered as irreversible and incurable chronic disease based on traditional means of management. However, the recent research advocates reversal of diabetes through simple lifestyle modification. Several '*Lifestyle Coun-*

selling Centres' have been established across India particularly in Maharashtra and Gujrat state where people at risk of DM type 2 and obesity are suggested to adopt '*two meal strategy*' and '*45 minutes exercise*' for weight reduction and diabetes reversal.¹⁶ The concept of '*Diabetes Reversal Centre*' (DRC) has been evolving slowly and around 13 DRCs are functioning across India.¹⁶ Conclusive evidence exists that through such initiatives, people have developed a positive behaviour of eating healthy foods, consistent physical activity etc.

Role of Health Care Professionals

Health care professionals are encouraged to converse with their patients regarding health benefits of exercise, healthy diet, and other lifestyle measures. They should strongly recommend that their patients engross in suitable structured exercise, mindful eating habits and stress mitigation as indicated. The information about nutrition/exercise/smoking cessation material/other lifestyle practices may be placed in the form of posters in waiting rooms. Brief consultation on diet and exercise can be a regular part of their interaction with patients in visits. Daily food and physical activity diary are beneficial for patients to monitor their health details. '*Exercise Prescription*' and incorporation of "Physical Activity" in daily routine is useful to change the behaviour of patient from sedentary to active. The research shows that patients would take more interest in exercising to stay healthy if advised by their physician. However, the exercise needs to be structured as per requirement by an exercise science expert as a physiotherapist. Educating patients about their disease and teaching them skills to regain and maintain their health for a lifetime is a powerful tool.

Take Home Messages

Having discipline in our regular routine through simple lifestyle interventions rather than adopting any diet plan is helpful to reduce the risk of LSDs. '*Self-controlled disease mitigation practices*' (SCDMP) may be promulgated among people who are at risk of LSDs, and they take *own* efforts in modifying behavioural risk factors associated with disease. By overlooking the root causes of LSDs and ignoring to prioritize lifestyle interventions for prevention, the medical community is placing individuals at harm. Patient centered behaviour including eliminating tobacco use, moderating alcohol consumption, improving sleep patterns, balanced diet and mental wellbeing must be targeted by each and every health care professional. Early diagnosis, prompt initiation of healthy lifestyle measures and delayed drug treatment could be an effective strategy not only to combat LSDs but also to develop positive attitudes towards life.

Preventive services though an essential part of health care is underutilized. As immunization is a

form of primary prevention, so also behavioural modification to prevent lifestyle disorders should be given equal importance. Using a comprehensive LSD Change program should be a first line of treatment aiming to improve health, reverse chronic disease and decreased burden on our society and health care system. Its' time to rebuild and rethink the gain in healthy life with the cost of pill vs efforts of changed behaviour.

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