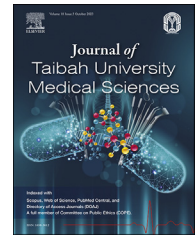




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Letter to the Editor

## Lifestyle medicine as a modality for prevention and management of chronic diseases



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### Abstract

Lifestyle medicine is an approach that focuses on modifying unhealthy behaviors and promoting healthy ones to prevent and manage chronic diseases. This modality addresses multiple risk factors such as physical inactivity, unhealthy diet, tobacco use, and stress. Evidence shows that adopting a healthy lifestyle can significantly reduce the incidence and progression of chronic diseases such as cardiovascular diseases, diabetes, and cancer. The implementation of Lifestyle medicine requires a multidisciplinary approach involving healthcare providers, patients, and communities. Healthcare providers play a pivotal role in educating and motivating patients to adopt healthy behaviors, while communities can provide a supportive environment that fosters healthy lifestyles. The aim of this letter to editor is to summarize the evidence supporting the use of Lifestyle medicine in the prevention and management of chronic diseases.

**Keywords:** Chronic diseases; Diet; Healthy eating; Lifestyle medicine; Physical activity

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### Dear Editor

Lifestyle Medicine (LM) is a preventive healthcare approach that addresses disorders caused by lifestyle factors and preventable causes of death. It focuses on educating and motivating individuals to improve their quality of life through healthier habits and behaviors, including a nutritious diet, regular exercise, restorative sleep, stress management, avoidance of risky substances, and positive social connections. LM aims to prevent chronic conditions like cardiovascular diseases, diabetes, metabolic syndrome, and obesity.<sup>1</sup> This field also seek to focus on addressing the root causes of many chronic diseases and thus has the potential to significantly reduce morbidity and mortality rates, as well as the financial burden associated with chronic disease management.<sup>2,3</sup>

Studies have shown that lifestyle interventions can be effective in preventing and treating a wide range of chronic diseases, including obesity, diabetes, hypertension, cardiovascular disease, and some types of cancer.<sup>4</sup> For example, lifestyle modifications such as healthy eating and regular exercise have been shown to lower blood pressure, improve lipid profiles, and reduce the risk of developing type 2 diabetes<sup>5</sup> (Table 1). Similarly, stress reduction techniques such as meditation and yoga have been found to improve mental health outcomes and reduce the risk of developing depression and anxiety.<sup>6</sup> In addition to the health benefits, lifestyle medicine can also be cost effective by reducing the need for expensive medical interventions, such as surgeries, medications, and hospitalizations.<sup>7</sup> Furthermore, lifestyle interventions are often low-cost or even free, making them accessible to a wide range of people.<sup>8</sup>

Research has also shown that multi-component lifestyle medicine interventions can be effective in mitigating depressive symptoms.<sup>9</sup> These interventions typically include a combination of several lifestyle changes, such as exercise, diet, stress management, and social support. While these interventions have been shown to be effective, the

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**Table 1: lifestyle medicine as modality for management of different chronic diseases.**

S/N	Disease	Lifestyle Prevention/Management approach
1	Type 2 Diabetes	Healthy diet, stress management, regular physical activity, weight management, getting enough sleep, regular blood monitoring and quitting smoking
2	Cancer	Balanced and healthy diet, manage weight and reduce inflammation, regular physical activity, good sleep and limit alcohol consumption
3	Cardiovascular diseases	Stress management, quitting smoking or avoiding exposure to second-hand smoke, regular exercise, healthy diet, limiting alcohol intake, maintaining a healthy weight
4.	Obesity	Healthy eating, regular exercise, behavior modification, quality sleep, stress management and maintenance of a healthy weight
5.	High blood pressure	Smoking cessation, limit consumption of alcohol, weight management, quality sleep, healthy diet and stress management
6.	High cholesterol	Limit alcohol, smoking, monitoring cholesterol, good sleep, stress management and healthy eating
7.	Chronic obstructive pulmonary disease (COPD)	Smoking cessation, engaging in regular physical activity, healthy diet, Pulmonary rehabilitation, avoiding air pollution, vaccinations against influenza and pneumococcal disease and managing stress
8.	Osteoporosis	Adequate calcium and vitamin D intake, regular exercise, avoiding smoking and excessive alcohol intake, maintaining a healthy weight
9.	Alzheimer's disease	Regular exercise, healthy diet, social engagement and participating in community events, cognitive stimulation activities, stress management, deep breathing exercises, sleep management, support from family members or caregivers can help improve quality of life for individuals with Alzheimer's disease and reduce caregiver burden.
10.	Depression and anxiety disorders	Regular exercise, increase self-esteem, healthy diet, getting enough sleep and maintaining a regular sleep schedule managing stress, social support from family, friends, or support groups can help reduce symptoms of depression and anxiety, avoiding alcohol and drugs
11.	Liver disease	Maintaining a healthy weight, healthy diet, avoiding alcohol, avoiding smoking, regular physical activity, vaccination against hepatitis A and B
12.	Kidney disease	Maintaining a healthy weight, healthy diet, drinking plenty of water, regular exercise, blood pressure management, blood sugar management, avoiding smoking

magnitude of the clinical effect is often small.<sup>9</sup> This means that while the interventions can improve depressive symptoms, the improvement may not be significant enough to produce a complete resolution of the symptoms.

Study also established that a lifestyle intervention, including dietary counseling and physical activity, significantly reduced blood pressure and improved kidney function in individuals with chronic kidney disease.<sup>10</sup> Another study indicates that Vitamin E therapy significantly improved liver function and reduced liver fat in individuals with non-alcoholic fatty liver disease.<sup>11</sup> These studies highlight the effectiveness of lifestyle medicine interventions for the prevention and management of kidney and liver diseases.

As chronic diseases continue to surge, it has become more crucial for healthcare providers to integrate lifestyle medicine into their clinical practice. Incorporating evidence-based lifestyle interventions into patient care with the aim of enhancing their health and managing chronic illnesses is the core of integrating lifestyle medicine into clinical practice. This approach acknowledges that lifestyle components such as nutrition, physical activity, sleep, stress management, and social connections are significant factors in the onset and advancement of various health conditions. To effectively integrate lifestyle medicine into clinical practice, healthcare professionals must adopt a holistic approach that factors in the patient's distinct needs, preferences, and objectives.<sup>12</sup> Additionally, they must possess extensive knowledge of current research on lifestyle interventions and their influence on health outcomes.<sup>13</sup> Lastly, the following strategies can be implemented to achieve optimal results in reducing the burden and cost associated with chronic diseases:

1. Training healthcare providers in Lifestyle Medicine
2. Conducting patient assessments and developing personalized lifestyle plans
3. Incorporating lifestyle interventions into treatment plans
4. Utilizing technology and resources to support lifestyle changes
5. Collaborating with allied health professionals for comprehensive care
6. Addressing barriers to lifestyle change
7. Empowering patients to take control of their health
8. Evaluating and tracking patient progress
9. Continuing education and staying up-to-date on research
10. Promoting lifestyle medicine as a primary approach to chronic disease management

In conclusion, lifestyle medicine is an achievable solution towards reducing the burden of chronic diseases and the associated financial costs. It represents a new modality for prevention and management of different chronic diseases through lifestyle changes, such as diet, exercise, sleep, stress management, social support, and avoidance of harmful substances.

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#### Conflict of interest

The author have no conflict of interest to declare.

## Consent

Not Applicable.

## Authors' contributions

IZS is responsible for the conception and design of the study, Data acquisition, interpretation and conclusion. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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