

A lifestyle prescription: Post-discharge management in depressed patients

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Abstract

Depression is a chronic and recurrent illness that is prevalent across societies worldwide, particularly in the United States, where it affects 1 in 10 Americans and nearly 1 in 5 adolescents and young adults. Patients with depression often present with persistent sadness and a marked loss of interest in previously enjoyed activities. Post-discharge planning is essential for improving long-term outcomes in individuals with depression. However, lifestyle factors such as diet, exercise, sleep, employment, and social support remain underemphasized despite growing evidence linking them to mood regulation. We followed a 26-year-old male who presented to the psychiatric ward with suicidal ideation. He was administered medications to manage his anxiety and suicidal thoughts. Upon stabilization, he received specific post-discharge counseling focused on implementing a high-protein, highly satiating diet, engaging in both aerobic and anaerobic physical activity daily, and pursuing a low-stress, purpose-driven job. Additionally, he was encouraged to participate in social groups and activities aligned with his interests to foster community engagement. This case highlights the importance of a structured lifestyle as a critical component of depression management and presents a potential model for integrating individualized lifestyle planning into psychiatric discharge protocols.

Keywords: Lifestyle modification; Depression; Mental health; Case report.

Introduction

Depression is a prevalent psychiatric mood disorder characterized by persistent feelings of sadness and a marked loss of interest in previously enjoyed activities [1]. As outlined in the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)*, the diagnosis of major depressive disorder requires the presence of a depressed mood or anhedonia, accompanied by at least five other symptoms. These include changes in appetite or weight, sleep disturbances, psychomotor agitation or retardation, fatigue, di-

inished ability to concentrate or think, feelings of worthlessness or excessive guilt, and suicidality, lasting for a minimum of two weeks. The combination and severity of these symptoms are assessed to determine whether the patient is experiencing a major depressive episode [2]. The prevalence of depression is 1 in 10 Americans and nearly 1 in 5 adolescents and young adults. Early intervention when depression is suspected is critical to reducing potential long-term consequences [3]. The treatment of depression falls under two umbrellas: pharmacological management and lifestyle modifications. Pharmacological treatment of depression includes multiple different classes of drugs including: SSRIS as first line, SNRIs, MAOis, and TCAS. Pharmacological treatment is effective in major depression, with little effect in minor depressive events [4]. Nonpharmacological treatments include psychotherapies including cognitive behavioral therapy and group therapy, while brain stimulation therapies include electroconvulsive therapies, vagus nerve stimulation, transcranial magnetic stimulation and deep brain stimulation [5]. Antidepressant usage has increased over the decades, yet a significant gap in the treatment of depression still exists.

According to a meta-analysis of 46,000 adult responses to the Medical Expenditure Panel Survey published in the *Journal of Internal Medicine*, adults who screened positive for depression were less likely to receive treatment compared to those who did not screen positive [6]. Additionally, a meta-analysis of data from the National Survey on Drug Use and Health (2015-2020) revealed that while depression rates increased significantly among adolescents and young adults during this period, there was little corresponding increase in treatment [3]. These findings highlight a critical gap: although patients with diagnosed depression are receiving treatment, many individuals with depression remain undiagnosed or untreated.

Despite the wide range of treatment options available to alleviate symptoms of depression, significant gaps in care persist for patients with major depressive disorder, particularly when pharmacological management alone proves insufficient [7]. Lifestyle modifications shown to support symptom improvement include improved sleep hygiene, balanced nutrition, light therapy, aerobic exercise, mindfulness meditation, enhanced social support, and relaxation techniques [7]. Current evidence suggests that engaging in moderate to vigorous physical activity for approximately 30 minutes, three to five times per week can meaningfully reduce depressive symptoms [8]. In addition, a nutrient-rich diet that focuses on the addition of fruits, vegetables, lean proteins, and whole grains, while minimizing processed, sugary, and fried foods is essential for supporting brain function and emotional well-being [9]. Quality sleep and meaningful social engagement are also critical components in managing depression [9]. However, despite growing evidence supporting these strategies, there remains a lack of clarity regarding the optimal combination, intensity, and timing of such lifestyle interventions, particularly during the post-discharge period when patients are most vulnerable to relapse. Understanding how to best integrate these interventions alongside pharmacotherapy could bridge critical gaps in treatment. This paper aims to highlight the current evidence on lifestyle prescriptions in depression care and propose a framework for implementing these strategies as an adjunct to standard pharmacologic treatment.

Case Report

A 26-year-old male with a past medical history of anxiety and depression was brought by local police

to the Larkin Community Hospital Emergency Department on March 29th, complaining of suicidal ideation. The patient was in his apartment when he called the police, explaining that he needed help feeling better before he acted on his intentions. He has been having depressive thoughts for years, which he attributes to a multitude of factors including feelings of inadequacy brought on by his family, unemployment, a semi-absent support system, and fear of hunger. He is a college graduate from a nearby university and previously worked at FIU as a student. He has been unemployed since March 2024, which he reports has further exacerbated his depressive symptoms. His daily routine is minimal; he skips breakfast and typically prepares chicken, beef, and rice for lunch, which he often eats again for dinner. In terms of physical activity, he no longer engages in any regular exercise, though he previously walked around campus and occasionally did push-ups or sit-ups. His sleep is reportedly fair. Socially, the patient expressed that he does not participate in any group activities or social circles. He rarely initiates contact with friends and noted that while he interacted with peers during college, those interactions have significantly declined since graduating, as he continues to live in the same area but no longer speaks with anyone regularly.

The patient explained that he does not have the best relationship with his family and that they speak only on occasion. He was once prescribed sertraline and trazodone by a psychiatrist years ago but is currently not on any medications. He endorses ongoing efforts to find employment, though he reports consistent difficulty due to limited opportunities and lack of transportation. A 16-point review of systems was unremarkable. Additionally, he mentioned that his depression was heightened by never finding his niche among peers with similar interests and felt he never developed the social tools to expand his interpersonal network. This has contributed to further anxiety in social situations and led to increasing isolation. For his anxiety, he was administered a combination of 5 mg IM haloperidol, 2 mg IM lorazepam, and 50 mg oral diphenhydramine — commonly referred to as the B52 cocktail. Urine drug screening, vitamin B12/folate levels, thyroid function tests, as well as CBC and CMP, were unremarkable.

The patient appeared his stated age of 26. He had an average stature, with fair hygiene, and was dressed in hospital-issued attire. He maintained a downward gaze throughout the interview. He appeared overtly dysphoric and tired, which remained consistent for the duration of the evaluation. He ambulated to the bed without difficulty. He was cooperative, forthright, and engaged well. Eye contact was partially appropriate. Speech was quiet in volume, with normal rate, rhythm, and spontaneity. He spoke prominently about feeling as though his life was at a tipping point, expressing that despite his efforts to turn things around, he continues to struggle.

Psychomotor activity was largely unremarkable, characterized by sitting still with mild psychomotor slowing. His mood appeared dysphoric, and his affect was restricted, congruent with mood, and appropriate to context. Insight and judgment were both fair. Sensorium was intact to person, place, and time. Thought processes were linear, logical, and goal-directed.

In terms of thought content, he denied current suicidal or homicidal ideation, intent, or plan. He also denied auditory or visual hallucinations, phobias, obsessive thoughts, or overvalued ideas. Attention and concentration were intact; he was able to spell the word “world” backward and successfully completed

serial sevens and simple math problems. Memory was intact, as he was able to recall three objects and demonstrated appropriate abstraction.

Discussion

When articulating the complexities of depression and the effects it has on one's health, it is important to analyze the current research in regards to the impacts on the physical, mental, and emotional well-being. Studies have shown that up to 71% of young patients suffer from depression [10]. Oftentimes, this occurs due to variances in their sleep, diet, and exercise, amongst other aspects of their lives. Making vital lifestyle modifications can help ensure patients suffering from depression are able to combat how they are feeling, even without pharmacological measures.

Sleep is a vital component in not only regulating hormone balance, improving memory, and maintaining homeostasis, but also in minimizing depression and suicidality [9]. Studies have shown that disrupted sleep leads to daytime inactivity and inability to feel as productive and in control of one's lifestyle [11].

Another aspect of one's lifestyle that can both positively and negatively affect one's mood is both whether they have an occupation and which particular occupation they have. Studies have shown that employment provides patients experiencing depression a sense of identity, importance, and belonging that they feel may be lacking in their day-to-day lives [12]. This is particularly relevant when analyzing what our patient was going through, as the patient was struggling to find opportunities given his particular life circumstances and had felt feelings of inadequacy. Certain opportunities given to employees whereby they are given emotional support in their work environments allow for them to express how they feel and cope with any difficulties they are experiencing, whether at work or beyond [13]. Additionally, the specific type of work environment also has a vital impact on one's mood and stress levels on a day-to-day basis. Studies have shown that patients who work in cubicles often have elevated levels of stress and decreased physical activity levels, further perpetuating disruptions in mood [14]. This later leads to decreased self-esteem and an inability to excel at work, and hence unemployment, and a perpetual cycle of feeling inadequate in maintaining one's day-to-day-life.

Exercise is another essential component in improving mood and reducing stress in patients suffering from depression. Studies have shown that particular exercise regimens have shown more promise than others when it comes to modulating one's mood, with results indicating resistance exercise training and aerobic training as having the most positive impact [15]. Studies have also shown that optimal training sessions are roughly between 30-90 minutes at least 2-4 times per week [16]. While many patients may indicate there are barriers to training such as lack of access to gym facilities or lack of time stemming from other day-to-day responsibilities, it is important to foster a sense of confidence and goals for patients to meet so they feel capable of improving their physical activity. This can be done with minimal physical equipment and even in the comfort of their own home. Rather than drawing up workout regimens, if clinicians are able to show patients a workout approach that fits their physical, mental, and emotional goals, patients are more inclined to participate in physical activity.

Optimizing dietary habits may contribute to alleviation of depressive symptoms. [17] discusses a systematic review which found that diets rich in fruits, vegetables, whole grains, fish and olive oil, which are characteristic of the Mediterranean diet, have been constantly linked to better mental health outcomes and a reduction of depressive symptoms. These foods have been found to have anti-inflammatory properties and contain a myriad of vitamins and minerals essential for optimal brain health. On the flip side, diets rich in processed meats, refined carbohydrates and sugary foods are associated with an increase of depressive symptoms. Such foods carry a higher likelihood of oxidative stress on the body and inflammation [17]. While the consumption of processed meats has been shown to be a risk factor, some studies challenge current accepted beliefs regarding protein sources [18]. Investigated the relationship between protein consumption and depression and found that total protein intake and protein intake from milk and milk products might reduce the risk of depressive symptoms in US adults. Our patient endorsed that over the last few months, he modulated his diet to increase his protein intake, including more dairy and lean proteins like chicken and fish. As a result, he described a change in his mood; feeling more neutral at times and having fewer depressive episodes as a result. As a result of these findings and our patients' anecdotal evidence, patients and their psychiatrists may opt to modify the patient's diet in accordance with these findings.

While accounting for the lifestyle factors mentioned above is essential for optimizing one's mood, it is also important to analyze one's social activities and their physical environment. This can include focusing on whether patients are involved in various social groups or whether they feel supported from others on a day-to-day basis. Studies have shown that patients may develop a sense of identity and purpose while also building up self-esteem and feelings of adequacy [19]. Self-criticism and negative self-appraisal have also been correlated with worsening depression and anxiety. Patients may feel inadequate levels of support not only in their home and work environments, but also in their surroundings when with friends, playing sports, or other social gatherings. This relates to our patient who felt under-supported in all facets of life, including from both his friends and his family, and was unsure of how to repair his support system. The patient alluded to wanting to find ways to enable him to find those with similar interests and increase his confidence in social surroundings. He had relented about not being a part of certain social groups and wanting to relate his interests and goals with the local community around him. This can be more easily done by aligning his beliefs while not forcing him to be around those he may not be comfortable with.

Conclusion

Based on current research and the challenges faced by patients with depression, such as the individual presented in this case report, establishing a consistent daily structure may help alleviate depressive symptoms and improve self-esteem. This involves examining specific factors such as diet, exercise, employment, and social engagement and designing a routine that supports both mental health and the patient's personal goals. Our approach goes beyond simply listing lifestyle modifications; it emphasizes how these elements can work together to positively impact the daily lives of individuals struggling with depression and anxiety. While previous studies have addressed these individual changes, our aim is to create an integrated daily schedule that aligns with the patient's needs while also easing the pressures they face.

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