

Introduction

Type 2 diabetes mellitus (T2DM) and metabolic syndrome (MetS) are increasingly prevalent health conditions that have garnered significant attention due to their profound impact on public health globally. T2DM is primarily characterized by chronic hyperglycemia,

syndrome is essential for effective prevention and treatment strategies. Both conditions share common risk factors, primarily insulin resistance, chronic inflammation, and obesity, which contribute to their development and progression. Recognizing this relationship highlights the importance of lifestyle modifications, such as weight management, increased physical activity, and dietary changes, in reducing the risk of T2DM and metabolic syndrome. By targeting the underlying mechanisms and promoting a holistic approach to health, it is possible to mitigate the burden of these interconnected conditions and improve overall metabolic health. Effective public health initiatives that f