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# Management of Diabetes by the Natural Products

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Lifestyle is playing an important role in the prevention of diabetes and cardiovascular diseases. The management of diet and physical activity can lead to above 50% reduction in the incidence of diabetes to those at high risk and the modification programs of lifestyle encourage the improvement in risk factors of diabetes [1]. Furthermore, the dietary management of DM is a complement of lifestyle and can achieve by a balance between food intake, physical activity and allowed medication to avoid the complications. Therefore, it can improve lipid and glycemic levels and control weight in type 2 diabetic patients [2]. Besides the importance of lifestyle management, most of the diabetics cannot getaway the pharmacotherapy to attain the target glucose levels. There is different oral hypo-glycemics and help to maintain glucose homeostasis in diabetics [3] like sulfonylurease, which up-regulates the secretion of insulin and metformin that decreases gluconeogenesis and increase peripheral glucose metabolism [4].

Another way to manage the diabetes is plant-derived medications. WHO study showed that 80% of world population base on medicinal plants for their health care and the using of medicinal plants in the treatment of diabetes are growing in African continent with high rate. This overreliance on anti-diabetic medicinal plants has probably invoked scientists to bioassay these plants in an effort to illustrate more hypoglycemic medicinal plants. The anti-diabetic potential of some extracts from medicinal plants has been demonstrated in the human and animal models of type II diabetes. However, a detailed research of the anti-diabetic plants is required to ameliorate the concerns of in vivo safety and efficacy [5]. *Nigella sativa* L. is fitting in with Ranunculaceae family and it is a yearly herbaceous plant broadly developed in the Mediterranean nations, Western Asia, Middle East and Eastern Europe. The Nigella sativa seeds have been added as a flavor to scope of Persian foods, for example, bread, pickle, sauces and servings of mixed greens [6]. Thymoquinone as an active component of *Nigella sativa* has therapeutic properties such as the anti-inflammatory effect for many inflammatory diseases including encephalomyelitis, colitis, edema, and joint inflammation via prostaglandins suppression [7]. These seeds are utilized in the Middle East, India and Northern Africa for the treatment of asthma, bronchitis, cerebral pain, fever, flu and diabetes mellitus [8]. *Nigella sativa* oil enhanced significantly the clinical symptoms of a patient with allergic disease. Furthermore, it has potent antioxidant and anti-diabetic effects, which is correlated to a modification of insulin signaling in type II diabetes [9] and can prohibit the damage of memory after the administration of scopolamine and decreases acetylcholine esterase action and the oxidative stress of brain of rats [10].

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