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## **Diabetes management: Role of phytoconstituents**

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iabetes mellitus is the most common non-communicable disease worldwide and the leading cause of death in developed Diabetes mellitus is a condition that occurs when the body can't use glucose normally. It is a heterogenous group of disorders characterized by high blood glucose levels that results from complete or relative insufficiency of insulin secretion and/ or insulin action. It has been estimated that by the year 2025, India will have the largest number of diabetic people in the world. India is one of the leading countries involved in medicinal plants research. A number of herbal medicinal plants have been studied for the treatment of diabetes however there is insufficient evidence to determine their efficacy. A study has been conducted with an objective to provide the information on antidiabetic phyotchemicals. Several medicinal preparations in varied forms are used in Ayurvedic system of medicines for diabetes. There are various phytoconstituents that have been reported to have antidiabetic activity. These are mainly polysaccharides, peptides, alkaloids, glycopeptides, triterpenoids, amino acids, steroids, xanthone, flavonoids, saponins, lipids, phenolics, coumarins, iridoids, alkyl disulphides, inorganic ions and guanidines. Leaves are the major storage sites of these compounds. Fruits, roots, aerial parts, flowers, seeds, stem barks, etc are the other parts of plants that can be used for the extraction of these therapeutic compounds. These phytoconstituents possess different antidiabetic function either by lowering blood glucose level in the body or by increasing insulin efficiency. These constituents also have the ability to stimulate glucose uptake, regeneration of  $\beta$ -cells in pancreas, lowering cholesterol level, lowering diabetic complications, etc. These herbal antidiabetic formulations contain drug in the form of aqueous extracts or powders of the different parts of the plants which are used in the treatment of diabetes. Numerous plants that belong to various families like Eugenia jambolana, Gymnema sylvestre, Momordica charantia, Pterocarpus marsupium, Trigonella foenum-graecum, Tinospora cordifolia, Mucuna prurita, Azadirachta indica, Zingiber officinale, Aegle marmelos, Ocimum sanctum, Curcuma longa, Emblica officinalis, etc. have been reported to hold antidiabetic activity.

## Biography

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