



CARBOHYDRATE METABOLIC DISORDERS CAN BE MANAGED WITH HERBAL-WAY OF LIFE

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Abstract:

Carbohydrates has various forms which in toto make bricks and fuel of our body. Starch and sugars are complex and among them glucose in particular is a sugar is of vital importance. But on one hand we need sugars so as to be helpful in generating energies among various tissues for their adequate functions, on the otherhand excess of sugar causes serious multiorgan problems shaping to chronic disorder. There are a large number of physiological disorders involving various forms of carbohydrate metabolism. Diabetes mellitus is a clinical syndrome characterized by inappropriate hyperglycemia caused by a relative or absolute deficiency of insulin or by a resistance to the action of insulin at the cellular level. Diabetes mellitus is affecting around 3 to 5% of the population worldwide. The introduction of sulfonylurea and metformin about 60 years back had led to a proper remedy to control the severity of the disease. But we have experienced lot many limitations and classic treatments of ancient time like Aayurvedic, Chinese and traditional medicinal practices have been reemphasizing on greater emphasis of plant materials. Plant materials which are being used as traditional medicine for the treatment of diabetes are considered to be the best source for a new drug or a lead to make a new drug. Plant extracts have been extensively tried for studying hypoglycaemic effects and extracts have also been tested by microbiological assays to be effective against fungal and bacterial infections. Nearly 500 plants have been tried and myself and several authors from India, China, Taiwan and Brazil have written quite long reviews. Several Mosses, Ferns and relatives of Ferns have been in use in Indian Ayurved, Homeopathy, Unani and Chinese traditional medicinal practices since antiquity. Modern research work investigating on detailed biochemical aspects have indicated their pharmaceutical relevance because of their acquisition of variety of organic compounds. Most medicinal plants selected for carbohydrate metabolism disorders have leaves possessing flavonoids, alkaloids and secondary metabolites as well as some have antihyperglycaemic properties. Higher plants contain a phosphofructokinase that utilizes inorganic pyrophosphate as a phosphorylating agent instead of ATP. This enzyme is more abundant in most plant tissues than the ATP dependent enzyme and is modulated by fructose 2,6 biphosphate in such a way that glycolysis is promoted. The intention of this presentation is still a different approach to advocate the use of well tested edible plant materi-



al as a dietary routine. Suitable examples and list of such well tested plants will be submitted. Obviously, a little change in life style would be essential. These plants can be grown in a kitchen garden or even in pots with suitable soil. Regular use of not fully boiled (preferably washed with boiling water) onion , garlic, ginger, mixed with power-turmeric as salad are of immense importance. Modern life style stresses compel us (those who can afford ?; because this is expensive) to go for “leafy dinner” which must have spinach, any vegetables available and leaves of garlic, onion, cabbage with no fruits. Elderly persons should have some juices of certain leaves with lemon and ginger, but all this becomes not only expensive but also unmanageable for active professional workers. At any rate, extra consumption of those “junkFood” preparations which have extra lactic acid must be avoided because Lactic acid can generate glucose and glycogen (gluconeogenesis: only in higher animals) particularly in muscle cells. Several aminoacids like alanine, cysteine, serine and aspartic acid can give rise to pyruvate and oxalacetate and in turn these compounds can produce glucose.

Biography:

Hit Kishore Goswami Address Rretired Professor of Botany and Genetics Qualification Ph.D. in Botany (Genetics) Population Cytogenetics of Isoetes , Ophioglossum and Psilotum Occupation/Designation Retired as Professor and Former Founder Chairman, Department of Genetics at Bhopal University, (now, Barkatullah University) Bhopal MP Major Activities Field work and laboratory investigations Science Awards of MP Conferred by Hon Excellency Late Giani Jail Singh (President of India) Fellowships of more than a dozen National and International Societies.

Publication of speakers:

- 1. Abraham, G, Yadav, RK and Kaushik, GK (2015) Altimicrobial activity and identification of potential antimicrobial compounds from aquatic pteridophyte, *Azolla microphylla* Kaulf Ludwigm. *Journal of Experimental Biology* 53: 232-235.

- 2. Adams, RP (1989) Identification of Essential Oil by Ion Mass Spectroscopy. New York: Academy Press, Inc.

- 3. Adamu, M, Naidoo, V and Eloff, JN (2012) Efficacy and toxicity of thirteen plants leaf acetone extracts used in ethnoveterinary medicine in South Africa on the egg and larva of *Haemonchus contortus*. *South African Journal of*

<https://www.meetingsint.com/chemical-engineering-conferences/bioprocess>

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