Use of alternative medicines in diabetes mellitus.


Resumo: AIMS: Enormous advances have been made in medical care but more people are still using herbal or alternative remedies. In chronic conditions such as diabetes patients may turn to alternative remedies that have been purported to improve glycaemic control. This study surveyed diabetic and control subjects about their use of all prescribed medication, over-the-counter supplements, and alternative medications. METHODS: Subjects were prospectively contacted in person or by telephone. Five hundred and two diabetic subjects and 201 control subjects were asked to provide details about themselves, their diabetes (for the diabetic subjects) and their use of prescribed medication, over-the-counter supplements and alternative medications. Subjects were asked to rank their assessment of the effectiveness of each medication. Costs were calculated on a per month basis from average prices obtained from five alternative health stores and five chemist shops. RESULTS: Of the diabetic subjects, 78% were taking prescribed medication for their diabetes, 44% were taking over-the-counter supplements and 31% were taking alternative medications. Of the control subjects, 63% were taking prescribed medication, 51% were taking over-the-counter supplements, and 37% were taking alternative medications. Multivitamins, vitamin E, vitamin C, calcium and aspirin were the most commonly used over the counter supplements. Garlic, echinacea, herbal mixtures, glucosamine were the most commonly used alternative medications. Chromium was used only by diabetic subjects and then only rarely. Subjects rated the effectiveness of the alternative medications significantly lower than for prescribed medications but still thought them efficacious. Alternative medications purported to have some hypoglycaemic effect were little used by diabetic subjects. Diabetic subjects spent almost as much money on over-the-counter supplements and alternative medications together as they did on their diabetic medications. CONCLUSIONS: One-third of diabetic patients are taking alternative medications that they consider efficacious but this is no more than in the control group. The money spent on alternative and non-prescription supplements nearly equals that spent on prescription medications. In view of the money spent in this area the time is past due to evaluate these remedies and to establish what merit they have.


Am Fam Physician;62(5):1051-60, 2000 Sep 1. Morelli V; Zoorob RJ

Resumo: Natural supplements are widely used in the United States and, while claims of their therapeutic effects abound, medical research does not always support their effectiveness. St. John's wort acts as a weak selective serotonin reuptake inhibitor with fewer side effects. S-Adenosylmethionine (SAMe) has enough of an antidepressant effect to warrant further research. More human studies are needed before garlic, bitter melon, soy and fenugreek supplements can be recommended for the management of diabetes, although chromium may be a promising treatment in some cases. Alpha lipoic acid is used in the treatment of diabetic neuropathy. The effects of ma huang/guarana combinations in obesity have not been well studied. These combinations may have potentially serious side effects but may also offer some benefit. The combination of hydroxyacetic acid and garcinia has proved no more effective than placebo.

Herbal products and supplemental nutrients used in the management of diabetes.


Resumo: As companies, including large pharmaceutical houses, try to market supplemental nutrients and herbal products to ever-increasing numbers of consumers, diabetics will start to approach their physicians about these alternative remedies. A whole new industry know as [quote]nutraceuticals[quote] has evolved. This new industry is a combination of the vitamin supplement and herbal industry trying to work with regulatory agents to develop good manufacturing processes to ensure that consumers obtain good products. In fact, some diabetics may be taking herbal or nutritional supplements without their physician's knowledge. Therefore, it is important to query diabetic patients at least once a year as to whether they are using any herbal or nutritional products. Once it is determined that a patient is using these products, physicians must decide if they or someone else should address the issue of taking these products. Physicians who have a good comfort level with herbal products by all means should recommend them to their patients. If such a comfort level is lacking or low, patients can be referred for a consultation on the use of supplements or told that information will be forwarded to them after contact is made with someone who has knowledge of diabetes and use of appropriate supplements. This article reviews nine nutrient and herbal remedies commonly used for diabetes to facilitate such patient education.

Revisão Geral

Systematic review of herbs and dietary supplements for glycemic control in diabetes.

Diabetes Care;26(4):1277-94, 2003 Apr. Yeh GY; Eisenberg DM; Kaptchuk TJ; Phillips RS

Resumo: OBJECTIVE: To conduct a systematic review of the published literature on the efficacy and safety of herbal therapies and vitamin/mineral supplements for glucose control in patients with diabetes. RESEARCH DESIGN AND METHODS: We conducted an electronic literature search of MEDLINE, OLDMEDLINE, Cochrane Library Database, and HealthSTAR, from database inception to May 2002, in addition to performing hand searches and consulting with experts in the field. Available clinical studies published in the English language that used human participants and examined glycemic control were included. Data were extracted in a standardized manner, and two independent investigators assessed methodological quality of randomized controlled trials using the Jadad scale. RESULTS: A total of 36 trials (single or in combination) and 9 vitamin/mineral supplements, involving 4,565 patients with diabetes or impaired glucose tolerance, met the inclusion criteria and were analyzed. There were 58 controlled clinical trials involving individuals with diabetes or impaired glucose tolerance (42 randomized and 16 nonrandomized trials). Most studies involved patients with type 2 diabetes. Heterogeneity and the small number of studies per supplement precluded formal meta-analyses. Of these 58 trials, the direction of the evidence for improved glucose control was positive in 76% (44 of 58). Very few adverse effects were reported. CONCLUSIONS: There is insufficient evidence to draw definitive conclusions about the efficacy of individual herbs and supplements for diabetes; however, they appear to be generally safe. The available data suggest that several supplements may warrant...
Diabetes mellitus is a metabolic disorder which has affected several millions of population all over the world. It is characterized by an excess of sugar in the blood and urine, hunger, thirst and gradual loss of weight. Insulin is a hormone which regulates the carbohydrate and triglyceride metabolism through its action at several sites and facilitates the entry of glucose accumulation in the blood. Insulin also stimulates the synthesis of glucokinase and moderates the degree of gluconeogenesis. In the diabetic patient, there is an aberration in the functioning of insulin. Prior to the 1950s, control of diabetes was based entirely on insulin therapy. Unfortunately, some patients developed complications and thus need for some other therapy was realized. Presently control of NIDDM relies on compounds from two classes--sulphonylureas and biguanides. Although these drugs are widely accepted as being efficacious in treating some diabetics, they are ineffective in many others. Consequently, testing of many chemicals and plant extracts has continued. The object of the present paper is to bring up-to-date information on the hypoglycemic activity of plants, above all the plants occurring in our country, and those who se hypoglycemic activity has been scientifically documented in a more detailed way. Recent theories on the mechanism of action of these plants are also discussed.

A review of natural products and plants as potential antidiabetic drugs.
J Ethnopharmacol;27(3):243-7, 1989 Dec. Ivorra MD; Payá M; Villar A
País de publicação: SWITZERLAND
Resumo: The present paper reviews the active, natural principles and crude extracts of plants which have been experimentally studied for hypoglycemic activity in the last ten years. Phytoconstituents with known structures have been classified in appropriate chemical groups and the active crude extracts have been listed alphabetically according to genus. Data are reported on their pharmacological activity, mechanism of action, toxicity and other properties.

Natural medicines used in the traditional Chinese medical system for therapy of diabetes mellitus.
J Ethnopharmacol;92(1):1-21, 2004 May. Li WL; Zheng HC; Bukuru J; De Kimpe N
País de publicação: China
Resumo: The paper reviewed compositions and pharmacological effects of eight antidiabetic herbal drugs that have been approved by health regulatory agency for commercial use in China. Investigators attributed the hypoglycemic effect of these products to their ability to restore the functions of pancreatic tissues and cause an increase in insulin output, to inhibit the intestinal absorption of glucose, or to facilitate the formation of metabolites in insulin-dependent processes. Treatment with herbal drugs has an effect on protecting beta cells and decreases the side effects most commonly observed.

The effect of medicinal plants of Islamabad and Murree region of Pakistan on insulin secretion from INS-1 cells.
Phytother Res;18(1):73-7, 2004 Jan. Hussain Z; Waheed A; Qureshi RA; Burdi DK; Verspohl EJ; Khan N; Hasan M
País de publicação: Pakistan
Resumo: In vitro testing of the extracts of medicinal plants collected from Islamabad and the Murree region on insulin secretagogue activity was carried out. Dried ethanol extracts of all plants (2Hl-ZH19) were dissolved in ethanol and DMSO, and tested at various concentrations (between 1 and 40 microg/mL) for insulin release from INS-1 cells in the presence of 5.5 mM glucose. Gilbenclamide was used as a control. Promising insulin secretagogue activity in various plant extracts at 1, 10, 20 and 40 microg/mL was found, while in some cases a decrease in insulin secretion was also observed. Artemisia roxburghiana, Salvia coccina and Monastera delicosa showed insulin secretagogue activity at 1 microg/mL (p < 0.05) while Abies pindrow, Centaurea iberica and Euphorbia helioscopia were active at 10 microg/mL (p < 0.05). Extracts of Bauhinia variegata and Bergenia himalnica showed effects at 20 microg/mL (p < 0.05) and Taraxacum officinale and Viburnum foetens at 40 microg/mL (p < 0.05). Insulin secretagogue activity could not be detected in the extracts of Adhatoda vasica, Cassia fistula, Chrysanthemum leucanthemum, Morus alba, Plectranthus rugosus, Peganum harmala and Olea ferruginea. The results suggest that medicinal plants of Islamabad and the Murree region of Pakistan may be potential natural resources for antidiabetic compounds.
Antioxidant activity in medicinal plants associated with the symptoms of diabetes mellitus used by the indigenous peoples of the North American boreal forest.


Resumo: Thirty-five plant species were selected from the published literature as traditionally used by the Indigenous Peoples of the boreal forest in Canada for three or more symptoms of diabetes or its complications. Antioxidant activities in methanolic extracts support the contribution of these traditional medicines in a lifestyle historically low in the incidence of diabetes. In a DPPH assay of free radical scavenging activity 89% of the methanol extracts had activity significantly greater than common modern dietary components, 14% were statistically equal to ascorbic acid and 23% had activities similar to green tea and a Trolox positive control. Superoxides produced with an NBT/xanthine oxidase assay found scavenging was significantly higher in 29% of the species as compared with the modern dietary components and Trolox. The methanol extracts of Rhus hirta, Quercus alba and Cornus stolonifera performed similarly to green tea's in this assay. Assessment of peroxyl radical scavenging using a DCF/AAPH assay showed 60% of the plant extracts statistically similar to Trolox while R. hirta and Solidago canadensis extracts were greater than green tea, ascorbic acid and Trolox. The majority of the species (63 and 97%, respectively) had scavenging activities similar to ascorbic acid in the superoxide and peroxyl radical scavenging assays.

Plantas de Morocco

Ethnopharmacological survey of medicinal plants used for the treatment of diabetes mellitus, hypertension and cardiac diseases in the south-east region of Morocco (Tafilalet).

J Ethnopharmacol;82(2-3):97-103, 2002 Oct. Eddouks M; Maghrani M; Lemhadri A; Ouahidi ML; Jouad H

Resumo: In this study, the medicinal plants used in the treatment of diabetes mellitus, hypertension and cardiac diseases were inventoried based on the ethnopharmacological survey in south-eastern Morocco: Tafilalet region. Seven hundred persons including 320 diabetic patients and 380 patients with hypertension and cardiac disorders and 20 traditional herbal healers were interviewed in different areas of Tafilalet. The results indicated that 80% of patients interviewed used medicinal plants to treat diabetes, hypertension and cardiac diseases because they state that phytotherapy is cheaper (58%), more efficient (40%) and better (65%) than modern medicine. In this ethnomedicinal enquiry, about 92 medicinal plants were cited. A lot of them are cited for the first time in Morocco. Many parameters have been evaluated such as knowledge of the toxic plants, doses, parts used, etc. Also, we have reported that 75% of type 2 diabetic patients used medicinal plants in association with modern drugs, while 10% of type 1 diabetic patients regularly used medicinal plants combined with insulin treatment. Some toxic plants have also been reported. In conclusion Tafilalet region disposes of a large phytotherapy knowledge which must be scientifically investigated especially in treating diabetes mellitus, hypertension and cardiac diseases.

Plantas da Índia e da Medicina Ayurvédica

Medicinal plants of India with anti-diabetic potential.


Resumo: Since ancient times, plants have been an exemplary source of medicine. Ayurveda and other Indian literature mention the use of plants in treatment of various human ailments. India has about 45000 plant species and among them, several thousands have been claimed to possess medicinal properties. Research conducted in last few decades on plants mentioned in ancient literature or used traditionally for diabetes have shown anti-diabetic property. The present paper reviews 45 such plants and their products (active, natural principles and crude extracts) that have been mentioned/used in the Indian traditional system of medicine and have shown experimental or clinical anti-diabetic activity. Indian plants which are most effective and the most commonly studied in relation to diabetes and their complications are: Allium cepa, Allium sativum, Aloe vera, Cajanus cajan, Cochcinia indica, Caesalpinia bonducella, Ficus bengalenesis, Gymnema sylvestre, Momordica charantia, Ocimum sanctum, Pterocarpus marsupium, Swertia chirayita, Syzygium cumini, Tinospora cordifolia and Trigonella foenum graecum. Among these we have evaluated M. charantia, Eugenia jambolana, Mucuna pruriens, T. cordifolia, T. foenum graecum, O. sanctum, P. marsupium, Murraya koenigii and Brassica juncea. All plants have shown varying degree of hypoglycemic and anti-hyperglycemic activity.

Ayurveda for diabetes mellitus: a review of the biomedical literature.


Resumo: Diabetes mellitus is a condition that is extremely serious from both clinical and public health standpoints. The traditional healthcare system of India, Ayurveda, offers a balanced and holistic multi-modality approach to treating this disorder. Many Ayurvedic modalities have been subjected to empirical scientific evaluation, but most such research has been done in India, receiving little attention in North America. This paper offers a review of the English language literature related to Ayurveda and diabetes care, encompassing herbs, diet, yoga, and meditation as modalities that are accessible and acceptable to Western clinicians and patients. There is a considerable amount of data from both animal and human trials suggesting efficacy of Ayurvedic interventions in managing diabetes. However, the reported human trials generally fall short of contemporary methodological standards. More research is needed in the area of Ayurvedic treatment of diabetes, assessing both whole practice and individual modalities.

Plantas de Trinidad e Tobago

Use of medicinal plants for diabetes in Trinidad and Tobago.


Resumo: Use of herbal remedies from medicinal plants (bush medicines) was studied in 622 people with diabetes mellitus attending 17 government health centers on the island of Trinidad, Trinidad and Tobago. Bush medicines were used by 42% of patients surveyed and were used for diabetes by 24%. Bush medicine use was more frequent in Afro-Trinidadians and in those of mixed ethnicity than in Indo-Trinidadians, and was also more prevalent in those with lower educational attainment. Most patients using bush medicines (214/264, or 81%) reported gathering the plants themselves, and 107/264 (41%) took them more frequently than once a week. Patients taking bush medicines mentioned 103 different plants used in remedies. Among the 12 most frequently mentioned, caraili, aloes, olive-bush, and seed-under-leaf were preferentially used for diabetes. Vervine, chandilay, soursop, fever grass, and orange peel were preferentially used for other indications. Patients who reported burning or numbness in the feet or feelings of tiredness, weakness,
Plants da Baixa California do Norte

Ethnobotanical treatments of diabetes in Baja California Norte.


Resumo: This paper provides a brief review of the current biomedical knowledge on some of the medicinal plants used in the treatment of diabetes in Baja California Norte. In general there is very little biochemical knowledge of the specific modes of action in the treatment of diabetes, but most of the plants have been found to contain substances (e.g., glucosides, alkaloids) frequently implicated as having anti-diabetic effects. Furthermore, clinical studies with animals indicate that most of these plants do have hypoglycemic properties. This paper calls attention to the need for further biochemical investigations into the plant constituents and invites collaboration in the development of clinical field studies to assess the efficacy of herbalists' use of medicinal plants in the treatment of diabetes in Baja California Norte or other U.S.-Mexico border areas. Such research can make an important contribution to the World Health Organization's plan of [quot ]Health for All by the Year 2000[quot ] through establishing a scientific basis for traditional medicine.

Plants used for the treatment of diabetes in Israel.

J Ethnopharmacol;19(2):145-51, 1987 Mar-Apr. Yaniv Z; Dafni A; Friedman J; Palevitch D

Plants used for the treatment of diabetes in Israel.

País de publicação: SWITZERLAND

Resumo: In an extensive ethnobotanical survey (130 informants) of the medicinal plants of Israel, 16 species were found to be used for hypoglycaemic treatments. The list includes Achillea fragrantissima (Forsk.) Sch-Bip, Ammi visnaga (L.) Lam, Atriplex halimus L., Capparis spinosa L., Ceratonia silqua L., Commiphora abyssinica (Forsk.) Del., Coriandrum sativum L., Inula viscosa (L.) Ait., Matricaria aurea (Leef.) Sch-Bip, Oreganum syriaca L., Paronychia argentea Lam, Prosopis farcta (Banks et Sol.) Macbride, Salvia fruticosa Mill., Sarcopoterium spinosum (L.) Sp., and Teucrium polium L.; eight of them (marked with an asterisk) are first recorded here as used for this purpose.

Plants ricais em Cromo

Chromium in a series of Portuguese plants used in the herbal treatment of diabetes.


Resumo: Chromium (Cr3+) is an essential micronutrient for humans. Its main action is thought to be the regulation of blood sugar, because chromium deficiency is associated with diabetic-like symptoms, and chromium supplementation is correlated with increased glucose tolerance and insulin sensitivity. Some Portuguese aromatic plants are utilized as tisanes by diabetic people as medicinal plants. Their active principle is not yet known, and the importance of their chromium content in the claimed therapeutic properties should not be discarded. Therefore, determination of chromium in some Portuguese medicinal plants was performed by flameless atomic absorption. All the analyzed plants contain chromium at the normal level for this element, but the plants used to prepare tisanes to help diabetic conditions contain higher levels (2.2 microg/g dry wt+/-0.88; n=11) than the others (0.88 microg/g dry wt+/-0.18; n=17).

Plants ricais em polifenolos : leguminosas

Relationship between polyphenol intake and blood glucose response of normal and diabetic individuals.


Resumo: Five leguminous and eight nonleguminous foods were analyzed for polyphenol concentration by the Prussian Blue and the Folin Denis methods and correlated with blood glucose response (glycemic index) in normal or diabetic volunteers. Polyphenol concentrations and intakes per 50 g available carbohydrate portions were higher in the leguminous foods than those in the nonleguminous foods. In both normal and diabetic individuals, a negative correlation was observed between glycemic index and the concentration or total intake of polyphenols. Polyphenols, especially the large polymeric type or condensed tannins, appear to be responsible in part for the reduced glycemic response to carbohydrate foods and in part to lower blood glucose response to legumes compared with cereal products. A high carbohydrate leguminous fibre diet improves all aspects of diabetic control.

Alfalfa


Diabetologia. 1990 Aug;33(8):462-4. Swanston-Flatt SK, Day C, Bailey CJ, Flatt PR. The effects on glucose homeostasis of eleven plants used as traditional treatments for diabetes mellitus were evaluated in normal and streptozotocin diabetic mice. Dried leaves of agrimony (Agrimonia eupatoria), alfalfa (Medicago sativa), blackberry (Rubus fruticosus), celandine (Chelidonium majus), eucalyptus (Eucalyptus globulus), lady's mantle (Alchemilla vulgaris), and lily of the valley (Convallaria majalis); seeds of coriander...
Diabetes complications, especially late (chronic) ones, are the main reasons of invalidity and early mortality. The most threatening treatment of diabetes mellitus by Artemisia herba-alba extract: preliminary study.

Aloha

Aloe vera: a systematic review of its clinical effectiveness.

Br J Gen Pract;49(447):823-8, 1999 Oct. Vogler BK; Ernst E

Resumo: Fifteen patients with diabetes mellitus were treated with Artemisia herba-alba Asso. extract (AHE). Results showed that AHE caused considerable lowering of elevated blood sugar and 14 out of 15 patients had good remission of diabetic symptoms with use of AHE. It is concluded that AHE contains material capable of reducing raised blood sugar in diabetes mellitus. No side effects were recorded during or after treatment with AHE.

Aloe vera

Coccinia indica

Coccinia indica in the treatment of patients with diabetes mellitus.


Resumo: Coccinia indica is a creeper which grows widely in Bangladesh and in many parts of the Indian sub-continent. The plant has been used since ancient times as an anti-diabetic drug by physicians who practice the Indian system of medicine known as Ayurveda. We have conducted a double blind control trial with preparation from the leaves of the plant on uncontrolled, maturity onset diabetics. The trial lasted for six weeks for an individual patient. Out of the 16 patients who received the experimental preparations 10 showed marked improvement in their glucose tolerance while none out of the 16 patients in the dummy group showed such a marked improvement. This difference is highly significant (kappa 2 with Yates' correction = 11.7, P < 0.001).

Momordica Charantia

Hypoglycemic activity of polypeptide-p from a plant source.


Resumo: A hypoglycemic peptide, Polypeptide-p, has been isolated from fruit, seeds, and tissue of Momordica charantia Linn (bitter gourd). Amino acid analysis indicates a minimum molecular weight of approximately 11,000 (166 residues). Polypeptide-p is a very effective hypoglycemic agent when administered subcutaneously to gerbils, langurs, and humans.
Opuntia streptacantha


Resumo: This report describes the effect produced by the complementary daily administration of Opuntia streptacantha sap to a diabetic volunteer being under treatment with chlorpropamide. The plant product improved remarkably the general symptomatology of the patient as well as his insulin and glucose blood levels.

Phyllanthus (Euphorbiaceae) - Brasil

A review of the plants of the genus Phyllanthus: their chemistry, pharmacology, and therapeutic potential.

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Resumo: The plants of the genus Phyllanthus (Euphorbiaceae) are widely distributed in most tropical and subtropical countries, and have long been used in folk medicine to treat kidney and urinary bladder disturbances, intestinal infections, diabetes, and hepatitis B. In recent years, the interest in the plants has increased considerably. Substantial progress on their chemical and pharmacological properties, as well as a few clinical studies of some Phyllanthus species have been made. This review discusses the current knowledge of their chemistry, the in vitro and in vivo pharmaceutical, biochemical, and clinical studies carried out on the extracts, and the main active constituents isolated from different species of plants of the genus Phyllanthus. These studies carried out with the extracts and purified compounds from these plants support most of their reported uses in folk medicine as an antiviral, in the treatment of genitourinary disorders, and as antinociceptive agents. However, well-controlled, double-binding clinical trials are lacking. Several compounds including alkaloids, flavonoids, lignans, phenols, and terpenes were isolated from these plants and some of them interact with most key enzymes. Together this data strongly supports the view that the plants belonging to the genus Phyllanthus have potential beneficial therapeutic actions in the management of hepatitis B, nephroliasiase, and in painful disorders.

Diuretic, hypotensive and hypoglycaemic effect of Phyllanthus amarus.

Pais de publicação: INDIA

Resumo: Diuretic, hypotensive and hypoglycaemic effects of Phyllanthus amarus (syn. Phyllanthus niruri) on human subjects were assessed. Nine mild hypertensives (four of them also suffering from diabetes mellitus) were treated with a preparation of the whole plant for 10 days. Suitable parameters were studied in the blood and urine samples of the subjects, along with physiological profile and dietary pattern before and after the treatment period. Significant increase in 24 hr urine volume, urine and serum Na levels was observed. A significant reduction in systolic blood pressure in non-diabetic hypertensives and female subjects was noted. Blood glucose was also significantly reduced in the treated group. Clinical observations revealed no harmful side effects. These observations indicate that P. amarus is a potential diuretic, hypotensive and hypoglycaemic drug for humans.

Mulberry trees (Morus alba L.) e Silkworms (Bombyx mori L.).

Polyhydroxylated alkaloids isolated from mulberry trees (Morus alba L.) and silkworms (Bombyx mori L.).
J Agric Food Chem;49(9):4208-13, 2001 Sep. Asano N; Yamashita T; Yasuda K; Ikeda K; Kizu H; Kameda Y; Kato A; Nash RJ; Lee HS; Ryu KS

Resumo: New polyhydroxylated alkaloids, (2R,3R,4R)-2-hydroxymethyl-3,4-dihydroxypropyridine-N-propionamide from the root bark of Morus alba L., and 4-O-alpha-D-galactopyranosyl-calystegine B(2) and 3 beta,6 beta-dihydroxynortropane from the fruits, were isolated by column chromatography using a variety of ion-exchange resins. Fifteen other polyhydroxylated alkaloids were also isolated. 1-Deoxynojirimycin, a potent alpha-glucosidase inhibitor, was concentrated 2.7-fold by silkworms feeding on mulberry leaves. Some alkaloids contained in mulberry leaves were potent inhibitors of mammalian digestive glycosidases but not inhibitors of silkworm midgut glycosidases, suggesting that the silkworm has enzymes specially adapted to enable it to feed on mulberry leaves. The possibility of preventing the onset of diabetes and obesity using natural dietary supplements containing 1-deoxynojirimycin and other alpha-glucosidase inhibitors in high concentration is of great potential interest.

Catarata e Glaucoma

Natural therapies for ocular disorders, part two: cataracts and glaucoma.

Resumo: Pathophysiologiical mechanisms of cataract formation include deficient glutathione levels contributing to a faulty antioxidant defense system within the lens of the eye. Nutrients to increase glutathione levels and activity include lipoic acid, vitamins E and C, and selenium. Cataract patients also tend to be deficient in vitamin A and the carotenes, lutein and zeaxanthin. The B vitamin riboflavin appears to play an essential role as a precursor to flavin adenine dinucleotide (FAD), a co-factor for glutathione reductase activity. Other nutrients and botanicals, which may benefit cataract patients or help prevent cataracts, include pantethine, folic acid, melatonin, and bilberry. Diabetic cataracts are caused by an elevation of polyols within the lens of the eye catalyzed by the enzyme aldose reductase. Flavonoids, particularly quercetin and its derivatives, are potent inhibitors of aldose reductase. Glaucoma is characterized by increased intraocular pressure (IOP) in some but not all cases. Some patients with glaucoma have normal IOP but poor circulation, resulting in damage to the optic nerve. Faulty glycosaminoglycan (GAG) synthesis or breakdown in the trabecular meshwork associated with aqueous outflow has also been implicated. Similar to patients with cataracts, those with glaucoma typically have compromised antioxidant defense systems as well. Nutrients that can impact GAGs such as vitamin C and glucosamine sulfate may hold promise for glaucoma treatment. Vitamin C in high doses has been found to lower IOP via its osmotic effect. Other nutrients holding some potential benefit for glaucoma include lipoic acid, vitamin B12, magnesium, and melatonin. Botanicals may offer some therapeutic potential. Ginkgo biloba increases circulation to the optic nerve; forskolin (an extract from Coleus forskohi) has been used successfully as a topical agent to lower IOP; and intramuscular injections of Salvia miltiorrhiza have shown benefit in improving visual acuity and peripheral vision in people with glaucoma.

Screening of Korean forest plants for rat lens aldose reductase inhibition.
Resumo: Naturally occurring substances which can prevent and treat diabetic complications were sought by examining ethanol extracts prepared from Korean forest plants for their inhibitory effects on rat lens aldose reductase activity in vitro. Among the plants examined, *Acer ginnala*, *Illicium religiosum* and *Cornus macrophylla* exerted the most strong inhibitory activity on aldose reductase.

"Germander" selvalgem - Efeito colateral

**Chronic active hepatitis and cirrhosis induced by wild germander. 3 cases**

Gastroenterol Clin Biol;17(12):959-62, 1993. Ben Yahia M; Mavier P; Métreau JM; Zafrani ES; Fabre M; Gatineau-Saillant G; Dhumeaux D; Mallat A

País de publicação: FRANCE

Resumo: We report 3 cases of chronic liver injury that were observed after prolonged treatment with wild germander, a herbal medicine recently prohibited by French Ministry of Health, following several reports suggesting its hepatotoxicity. Chronic active hepatitis was found in 2 cases, and active cirrhosis in 1 case. The onset of hepatitis occurred after 6 to 7 months of treatment. Serum anti-nuclear and anti-smooth muscle antibodies were present in 2 patients. In 2 cases, wild-germander involvement was recognized several months after appearance of liver injury. Following treatment discontinuation, outcome was favorable in the 3 patients. These observations suggest that diagnosis of acute or chronic liver injury of unknown origin should always include the search for herbal medicine treatment.

Semente de "Lupine" - Efeito Colateral

**Anticholinergic toxicity associated with lupine seeds as a home remedy for diabetes mellitus.**


Resumo: We describe a case of sparteine intoxication associated with using a preparation from lupine seeds. A female patient of Portuguese origin presented to the emergency department with classic anticholinergic signs after ingestion of a lupine seed extract. She took the preparation with the belief it represented a cure for her recently diagnosed diabetes. Analysis of the patient’s lupine bean extract identified the preponderant compound as oxo-sparteine by gas chromatography/mass spectrometry. Intoxication by lupine seeds rarely occurs in human beings. To our knowledge, no medical or toxicologic evidence supports a belief that lupine extract could lower serum glucose levels. This case highlights the need for emergency care providers to be aware of the health hazards that can be associated with the use of such home remedies.