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Hidden danger of few extensively used vegetables and herbs renowned for the treatment of diabetes

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The people around the world have continuously been using herbs and vegetables for the cure and treatment of many diseases since the ancient era. These are considered to have many benefits instead of any side effects. High fiber diets are uniformly recommended for diabetics, particularly, soluble fiber, found mainly in fruits, vegetables, and some seeds. *Adiantum capillus-veneris* is largely used for treatment of diabetes in Pakistan. Its stem and roots are generally soaked in water over night and then this extract is used. *Gymnema Sylvester*, *Eugenia jambolana*, *Momordica charantia* and some others having fame in this field like, *Pongamia glabra*, *Sphaeranthus*, *Trigonella foenum-graecum*, *Allium sativum* and *Clerodendron* were also selected. Selection of herbs was done after extensive discussion with experts. The main consideration was on the relation of hypoglycemic nature and the metals. The main technique used was atomic absorption spectroscopy including Graphite Furnace atomic absorption spectroscopy. Iron and chromium was found in all anti-diabetic herbs including *Adiantum capillus-veneris*. Manganese and copper were present but their anti-diabetic character was not established. Concentration of iron was found to have a negative effect because high concentration decreases the bio-absorption and produces indigestion. The alarming results were obtained for toxic metals. As the concentration of lead in *Adiantum capillus-veneris* was found 6.00×10^{-3} mg/g, nickel 0.0183 mg/g and cadmium 6.00×10^{-3} mg/g. The amount of lead was also found high in *Trigonella foenum-graecum* and that was 1.55×10^{-2} mg/g. Water soluble lead was also found high in *Adiantum capillus-veneris*, *Allium sativum*, and *Trigonella foenum-graecum* which was about 0.75×10^{-2} mg/g. *Eugenia jambolana* also showed very high water soluble lead which was 0.0016 mg/g. It means that, prolonged use of this water extract might be dangerous.

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