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## Knowledge and Usage of Bitter Gourd as an Anti-Diabetic Plant in Tanzania

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### Abstract

Diabetes mellitus type two is on the rise all over the world with an alarming incidence rate in many low and middle income countries. In Tanzania, the national prevalence rate of diabetes is 2.3 per cent. The increasing trend is especially common in urban areas. Insufficient supplies of oral anti-diabetic drugs and insulin call for alternative strategies to treat this disease. *Momordica charantia*, the so-called bitter gourd, is one promising plant. In some countries, it is used as a phyto-medicinal plant to reduce blood glucose levels. The current survey assessed the knowledge and usage of it among diabetic patients at the Kilimanjaro Christian Medical Centre, Tanzania. Of the 155 interviewed patients, only 7 per cent have heard about the plant, while only 5 per cent used it, in addition to oral anti-diabetic agents, as a medicinal plant. Preparation of the bitter gourd varied from eating it as a juice, cooked, or cooked and mixed with other vegetables. Most patients used it once per day. Although the bitter gourd was not well known among patients, the concept of using traditional medicine was widely accepted. *Aloe vera*, *Moringa oleifera*, and African plum tree were among the mostly named plants, used for diabetes mellitus, hypertension, wounds, and cancer. Generally, patients were very open towards the idea of using bitter gourd as a treatment or adjunct treatment for their diabetes mellitus. Further interviews were conducted among health workers in the area surrounding Kilimanjaro Christian Medical Centre. Here, 35 per cent knew bitter gourd and its health related effects; while 8 per cent already recommended its use for diabetic treatment. Others would hesitate to recommend it due to lack of scientific and reliable data.

In summation, this survey shows that there is high potential to apply alternative strategies to treat diabetes mellitus. However, scientific studies on efficacy and safety of such phyto-medicinal plants are needed. In regard to *Momordica charantia*, clinical trials are planned for 2013 in India and Tanzania by the World Vegetable Center to test the viability of utilising the gourd as an alternative strategy for treating diabetes mellitus.

**Keywords:** Diabetes mellitus type two, *Momordica charantia*, Tanzania, traditional medicine