



## PIC QUESTION OF THE WEEK: 08/29/05

Q: How effective is hoodia as a weight loss product?

A: Hoodia is currently one of the most advertised dietary supplements for weight loss. It is a type of cactus found in the Kalahari Desert in South Africa and belongs to a family of cacti known as *Apocynaceae*. *Hoodia gordonii* is suggested to be the most active member of this cactus family. Hoodia may also be referred to as xhoba, Kalahari Diet, or Hoodia P57. Its use originated with the San people of South Africa who ate pieces of the cactus to suppress hunger and thirst during prolonged hunting trips. The portions of hoodia used by the natives for weight loss are the stems and roots. These parts contain P57, a steroidal glycoside that may be responsible for appetite suppression. The precise mechanism of action is unknown; however, animal studies suggest that P57 may increase ATP in hypothalamic neurons by 50-150%. The hypothalamus appears to possess metabolic and nutrient-sensing capabilities involving ATP. Increases in ATP may stimulate neural and endocrine responses related to appetite. Currently there are **no** published comparative clinical trials supporting the efficacy of hoodia as an appetite suppressant. In addition, there is no data regarding adverse effects, drug interaction potential, etc. with this compound. The weight loss product TrimSpa X32® previously contained ephedra, but now contains hoodia and other ingredients including large amounts of caffeine. Other products marketed as hoodia include Hoodia Diet Tab®, Hoodia Weight Loss®, and Hoodoba Diet Pills®. Interestingly, reports have revealed that some products distributed as hoodia may not actually contain the substance. It is unclear if hoodia extract and desiccated powdered hoodia have the same effect as the whole plant. Patients should be advised of the unregulated nature of these products and the inherent risk associated with their use. Although there is extensive commercial promotion and anecdotal testimony, little scientific data is available to support the efficacy and safety of hoodia as an appetite suppressant.

### References:

- Hoodia for weight loss. Pharmacist's Letter/Prescriber's Letter 2004;20(6):200605.
- MacLean DB, Luo LG. Increased ATP content/production in the hypothalamus may be a signal for energy-sensing of satiety: studies of the anorectic mechanism of a plant steroidal glycoside. Brain Res 2004;1020(1-2):1-11.
- Hoodia. Natural Medicines Comprehensive Database (accessed 8/25/05).