

Weight Loss

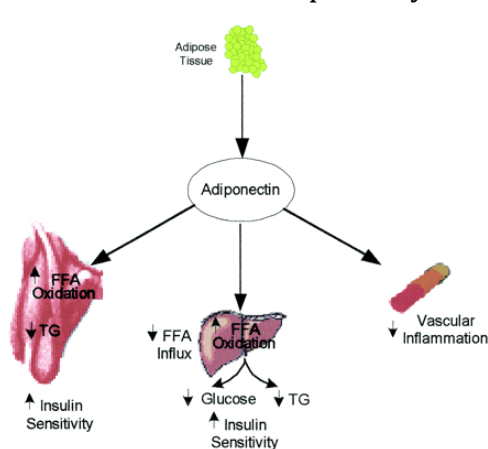
African Mango

People wanting to lose weight are always searching for assistance in reaching their goal. African Mango extract may be just that aid. Featured on Dr. Oz and in the news recently, African mango is becoming very popular.

Irvingia Gabonensis is the botanical name for African Mango. Growing in Africa, the mango has been used in many applications. The bark is used for medicinal drugs, while the seeds are used in food manufacturing and now the seed extract has made its way to the weight loss world.



Just how does African Mango work and how much is needed? It seems that African Mango has some strong actions on the prevention of adipogenesis, or development of fat cells from pre-adipocytes (fat cells)(9,11). African Mango anti-obesity actions include a modulation to four critical metabolic pathways in reduction of body weight and obesity including, PPAR Gama, leptin and adiponectin hormone modulation, and glycerol-3 phosphate dehydrogenase. PPAR is a metabolic pathway involved with liver metabolism of triglycerides (fats), and insulin sensitivity.



African Mango seems to have a positive effect on PPAR reducing liver fats and improving insulin sensitivity in the liver. African Mango also seems to modulate leptin and adiponectin levels in the body as well. Neuro-hormone protein leptin acts on the hypothalamus area of the brain regulating hunger and food intake and energy expenditure. Obese individuals ironically have elevated levels of leptin, increasing their desire for foods. Adiponectin on the other hand increases cell oxidation of fatty acids while increasing insulin sensitivity or action. Over weight and obese individuals have lower levels of these fat-burning hormones. These two hormones are manufactured in fat cells and their ratios are considered a link

to type II diabetes and obesity related cardiovascular atherosclerosis risk with these individuals. Finally African Mango has actions on glycerol-e phosphate dehydrogenase, simply put this metabolic pathway that converts sugars and starch into body fat. African Mango has a reducing action on this pathway. (8,9,11,12,14)

Study Results: One study with 102 participants that were overweight or clinically obese used 2 capsules of African Mango extract 1 capsule taken before meals twice daily. The double blind study indicated a significant improvement in body weight reduction, body fat percentage and waist circumference. Additionally improvements were seen in total plasma cholesterol and blood glucose. Adiponectin and leptin levels were observed showing modulation. Other studies have indicated results similar to this study. (2,12)

Dosage: One study suggested 3 caps 350mg 3 times a day 30 minutes before meals. A total daily amount of 3.15 grams of African Mango extract. While another study used 150mg of extract 1 cap 30 minutes before lunch and dinner meals with warm water. (2,12)

Adverse Effects: The majority of adverse effects were gastrointestinal and dry mouth. While individuals noted some unusual effects, taking African Mango extract on WebMD most clinical results indicated GI upset because of delayed stomach emptying. (2,5,6) Finally a toxicity study with

seed extracts and its use in foods at a total of 100, 1000, and 2500 milligrams per kilogram of body weight resulted in no adverse effects. (2,7,12)

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Reference:

1. **Uses, management and economic potential of *Irvingia gabonensis* in the humid lowlands of Cameroon** Elias T Ayuk^a, Bahiru Duguma^b, Steve Franzel^a, Joseph Kengue^c, Matthias Mollet^{b,1}, Theophile Tiki-Manga^b, Pauline Zenkeng^c, International Centre for Research in Agroforestry (ICRAF), P.O. Box 30677 Nairobi Kenya, IRAD/ICRAF Collaborative Agroforestry Project, P.O. Box 2123, Yaoundé Cameroon, IRAD/NCRE Collaborative Project, BP 2067, Yaoundé Cameroon <http://www.sciencedirect.com/science/article/pii/S0378112798003235>
2. **Lipids in Health and Disease Research The effect of *Irvingia gabonensis* seeds on body weight and blood lipids of obese subjects in Cameroon** Judith L Ngondi, Julius E Oben* and Samuel R Minka Address: Nutrition, HIV and Health Research Unit, Department of Biochemistry, P.O Box 812, Faculty of Science, University of Yaounde I, Cameroon Email: Judith L Ngondi - jngondi@yahoo.com; Julius E Oben* - juliusoben@hotmail.com; Samuel R Minka - sminka@uycdc.uninet.cm * Corresponding author <http://www.biomedcentral.com/content/pdf/1476-511x-4-12.pdf>
3. **Irvingia: A Magic Pill? By Tanya Edwards, MD, M.Ed.** <http://www.doctoroz.com/blog/tanya-edwards-md-med/irvingia-magic-pill>
4. <https://www.lef.org/Vitamins-Supplements/Item01292/Integra-Lean-Irvingia.html>
5. <http://www.webmd.com/vitamins-supplements/ingredientmono-1252-IRVINGIA%20GABONENSIS.aspx?activeIngredientId=1252&activeIngredientName=IRVINGIA%20GABONENSIS>
6. Drugs.com <http://www.drugs.com/npp/african-mango.html>
7. *Food Chem Toxicol*. 2012 May;50(5):1468-79. Epub 2012 Feb 22. Subchronic toxicity and mutagenicity/genotoxicity studies of *Irvingia gabonensis* extract (IGOB131). Kothari SC, Shivarudraiah P, Venkataramaiah SB, Gavara S, Soni MG. Source Gateway Health Alliance, Inc. 4769 Mangels Blvd., Fairfield, CA 94534, USA. <http://www.ncbi.nlm.nih.gov/pubmed/22386809>
8. PPAR-gamma: adipogenic regulator and thiazolidinedione receptor. B M Spiegelman <http://diabetes.diabetesjournals.org/content/47/4/507.short>
9. *Annu Rev Cell Dev Biol*. 2000;16:145-71. Molecular regulation of adipogenesis. Rosen ED, Spiegelman BM. Source Department of Cancer Biology, Dana-Farber Cancer Institute, Boston, Massachusetts 02115, USA. edrosen@massmed.org <http://www.ncbi.nlm.nih.gov/pubmed/1103123>
10. <http://www.ncbi.nlm.nih.gov/pubmed/19254366>
11. *Lipids Health Dis*. 2009 Mar 2;8:7. IGOB131, a novel seed extract of the West African plant *Irvingia gabonensis*, significantly reduces body weight and improves metabolic parameters in overweight humans in a randomized double-blind placebo controlled investigation. Ngondi JL, Etoundi BC, Nyangono CB, Mbofung CM, Oben JE. Source Laboratory of Nutrition and Nutritional Biochemistry, Faculty of Science, University of Yaounde I, Yaounde, Cameroon. jngondi@yahoo.com <http://www.ncbi.nlm.nih.gov/pubmed/19254366>
12. American Diabetes Association: Leptin-to-Adiponectin Ratio as a Potential Atherogenic Index in Obese Type 2 Diabetic Patients Noriko Satoh, MD, PHD¹, Mitsuhide Naruse, MD, PHD¹, Takeshi Usui, MD, PHD¹, Tetsuya Tagami, MD, PHD¹, Takayoshi Suganami, MD, PHD², Kazunori Yamada, MD, PHD³, Hideshi Kuzuya, MD, PHD³, Akira Shimatsu, MD, PHD¹ and Yoshihiro Ogawa, MD, PHD²⁴ <http://care.diabetesjournals.org/content/27/10/2488.full>
13. <http://trialx.com/curetalk/wp-content/blogs.dir/7/files/2011/05/diseases/Adiponectin-2.jpg>
14. American Diabetic Association: Diabetic Care: Adiponectin: More Than Just Another Fat Cell Hormone? Manju Chandran, MD¹, Susan A. Phillips, MD², Theodore Ciaraldi, PHD¹ and Robert R. Henry, MD¹ <http://care.diabetesjournals.org/content/26/8/2442.full> <http://care.diabetesjournals.org/content/26/8/2442/F3.expansion.html>
15. Harry R Kissileff, John C Thornton, Migdalia I Torres, Katherine Pavlovich, Laurel S Mayer, Vamsi Kalari, Rudolph L Leibel, and Michael Rosenbaum Leptin reverses declines in satiation in weight-reduced obese humans *Am J Clin Nutr* 2012 95: 309-317; First published online January 11, 2012. doi:10.3945/ajcn.111.012385 <http://www.ajcn.org/content/95/2/309.abstract>