## (Clinical Science Reference Collection)



## Impacts and future perspectives on the use of RAW honey as an antidiabetic, antimicrobial, antiobesity, antiinflammatory and anticancer agent

**Please note:** health benefits are associated with RAW honey only. Heat and pasteurization honey changes the structure of the honey, causing drastic blood glucose spikes and making it inflammatory!

A closer look at the proposed mechanisms of action of antidiabetic effect of honey suggests the following:

- Honey, through its GIT effects, would possess characteristic effects of α-glucosidase inhibitors such as acarbose.
- Honey, through its hepatic and/or pancreatic effects, would possess characteristic effects of insulin secretagogues such as sulfonylureas (glibenclamide) as well as repaglinide and nateglinide.
- Honey, through its hepatic and muscular amelioration of oxidative stress-induced insulin resistance, would possess characteristic effects of thiazolidinediones and biguanides such as metformin.
- Honey, through its effects on incretin and appetite-regulating hormones, would possess characteristic effects of dipeptidyl peptidase-IV inhibitors such as sitagliptin and GLP-1 mimetic such as exenatide.
- Honey, through its anti-lipidemic effects, would possess characteristic effects of anti-obesity drugs.
- All these clearly indicate that honey possesses characteristics of most of the currently prescribed antidiabetic drugs and suggest it is a novel antidiabetic agent.

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## References:

Int J Biol Sci. 2012; 8(6): 913–934. Honey - A Novel Antidiabetic Agent. Omotayo O. Erejuwa et al.

J Diabetes Res. 2014; 2014: 491571. The Protective Effects of Insulin and Natural Honey against Hippocampal Cell Death in Streptozotocin-Induced Diabetic Rats. Iraj Jafari Anarkooli et al.

Al-Waili NS, Haq A. Effect of honey on antibody production against thymus-dependent and thymus-independent antigens in primary and secondary immune responses. J Med Food. 2004;7:491–494.

Al-Waili NS, Boni NS. Natural honey lowers plasma prostaglandin concentrations in normal individuals. J Med Food. 2003;6:129–133. [PubMed]

Ahmad A, Alam Khan R, Mesaik MA. Anti inflammatory effect of natural honey on bovine thrombin-induced oxidative burst in phagocytes. Phytother Res. 2009;23:801–808.

Turkmen N, Sari F, Poyrazoglu ES, Velioglu YS. Effects of prolonged heating on antioxidant activity and colour of honey. Food Chem. 2006;95:653–657.

Rakha MK, Nabil ZI, Hussein AA. Cardioactive and vasoactive effects of natural wild honey against cardiac malperformance induced by hyperadrenergic activity. J Med Food. 2008;11:91–98. [PubMed]

Al-Mamary M, Al-Meeri A, Al-Habori M. Antioxidant activities and total phenolics of different types of honey. Nutr Res. 2002;22:1041–1047.

Zumla A, Lulat A. Honey: a remedy rediscovered. J R Soc Med. 1989;82:384–385.

Hegazi AG, Abd El-Hady FK. Influence of honey on the suppression of human low density lipoprotein (LDL) peroxidation (in vitro) Evid Based BMC Complement Altern Med. 2009;6:113–121.

Sewllam T, Miyanaga N, Onozawa M, Hattori K, Kawari K, Shimazui T, Akaza H. Antineoplastic activity of honey in an experimental bladder cancer implantation model: in vivo and in vitro studies. Int J Urol. 2003;10:213–219.

Moundoi MA, Padila-Zakour OI, Worobo RW. Antimicrobial activity of honey against food pathogens and food spoilage microorganisms. NYSAES. 2001;1:61–71.

Olaitan PB, Adeleke EO, Ola OI. Honey: a reservoir for microorganisms and an inhibitory agent for microbes. Afr Health Sci. 2007;7:159–165

Tonks AJ, Cooper RA, Jones KP, Blair S, Parton J, Tonks A. Honey stimulates inflammatory cytokine production from monocytes. Cytokine. 2003;21:242–247

Iran J Basic Med Sci. 2013 Jun; 16(6): 731–742. Traditional and Modern Uses of Natural Honey in Human Diseases: A Review. Tahereh Eteraf-Oskouei et al.

Recent Pat Antiinfect Drug Discov. 2009 Nov;4(3):206-13. Rediscovering the antibiotics of the hive. Boukraâ L et al.

J Food Sci. 2008 Nov;73(9):R117-24. Functional properties of honey, propolis, and royal jelly. Viuda-Martos M et al.

FEBS Lett. 2005 Jan 31;579(3):705-11. Chrysin suppresses lipopolysaccharide-induced cyclooxygenase-2 expression through the inhibition of nuclear factor for IL-6 (NF-IL6) DNA-binding activity. Woo KJ et al.