

Honey

قال تعالى (يَخْرُجُ مِنْ بُطُونِهَا شَرَابٌ مُخْتَلِفٌ أَلْوَانُهُ فِيهِ شِفَاءٌ لِلنَّاسِ إِنَّ فِي ذَلِكَ لَآيَةً لِقَوْمٍ يَتَفَكَّرُونَ)
{٦٩} النحل.

Honey is produced by honeybees from the nectar of flowers and has been ingested by humans since ancient times. It is also has been used topically by the Chinese, Romans, and Greeks for medicinal purposes (1). It is composed mainly of sugars (70% to 80%) of its composition is fructose, sucrose, glucose, and other sugars), a low level of water, as well as proteins, hydrogen peroxide, and gluconic acid.

Medicinal Uses of Topical Honey

Honey has a deriding and cleansing action and acts as a barrier to prevent infection. Its antimicrobial properties as a topical agent have been described and documented in both in vitro and in vivo studies (4-7) and evidence supports its usefulness in wound healing. The antimicrobial properties of honey are believed to derive from its high sugar and low moisture content, the acidic properties of gluconic acid, and the antiseptic properties of hydrogen peroxide(2).



More recently, studies have examined the benefits of honey in the treatment of burns, skin grafts, Fournier's gangrene, radiation-induced mucositis, and dermatologic conditions such as seborrhea and dermatitis. Small controlled studies have indicated that honey is beneficial in wound care for cesarean section, (8) non-healing wounds that do not respond to other treatments, (9) and chronic, surgical, and traumatic wounds. (10) These studies found that honey improves healing, reduces healing times, decreases edema, allows for ease of dressing, and reduces infection.

Inside this issue:

1. Honey .
2. Gene May Help Predict Timing of Alzheimer's Onset

Special points of interest:

- * Uses of topical honey.
- * Uses of ingested honey.
- * Dosing of honey.
- * Choice of honey .



Randomized controlled trials comparing honey with dressings such as sulfadiazine, amniotic membrane, and OpSite™ for treatment of superficial (12) and partial-thickness wounds(13-15)reported that honey therapy was associated with shorter healing times. Honey has also been demonstrated to be useful for the healing of split skin grafts that are used to treat lower-leg venous ulcers (16).

Medicinal Uses of Ingested Honey

When taken orally, honey has been shown to influence LDL cholesterol levels, probably as a result of its flavonoid content (3) and its antioxidant properties. Some research suggests that darker honeys have higher antioxidant content than lighter honeys.(3)The evidence that ingested honey is useful in the treatment of hyperlipidemia comes mainly from anecdotal case reports and in vitro studies(17) that demonstrate honey's flavonoid and antioxidant properties. A small crossover case study of 6 patients showed that a 15-day treatment of oral honey was associated with reductions in levels of C-reactive protein (7%), total cholesterol (8%), and LDL-cholesterol (11%) (18) However, clinical studies providing head-to-head comparisons between honey and statins or other lipid-lowering therapies are not available.

Dosing of Honey

in the management of venous ulcers it is recommended that topical honey be applied twice daily and the wound evaluated weekly. Using this regimen, some improvement should be expected after 2 weeks. In a 12-week course of treatment, Med honey™ dressings applied daily were found to be acceptable to patients with non-healing wounds, and this was attributable to its deodorizing property and pain reduction. Honey-impregnated dressings are available in 2" × 2" and 5" × 4" sizes. For ingested honey, there is no standardized dosing.(20).

Choice of Honey

Two honeys have been examined for their utility as medicinal agents. Manuka honey is derived from floral sources found in Australia and New Zealand, and jambhul honey is derived from a plant found in India. Recent studies favor manuka honey, which is available as a proprietary product known as Medihoney™ (Medihoney Pty Ltd., Queensland, Australia). Medihoney™ was approved by the US Food and Drug Administration (FDA) in 2007 for use in wounds and burns.(19) are recommended as having high bactericidal activity, whereas raw honey, which is less regulated and minimally processed, is not recommended for use as a topical agent. Commercial honey available in supermarkets has proven effective and is low in cost. In addition, FDA-approved supermarket-variety honey is gamma-irradiated to inactivate potential spores.

Compounded by

Noha Gamal,

Samar Mahmoud

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Gene May Help Predict Timing of Alzheimer's Onset

Discovery of **TOMM40** adds to understanding of disease development, A gene that may offer a highly accurate prediction of the risk of developing Alzheimer's disease and the age at which people will begin to show symptoms has been identified by U.S. researchers. The **TOMM40** gene may be the most highly predictive Alzheimer's gene discovered so far, said the Duke University Medical Center research team, who found that the gene could predict the age of Alzheimer's disease onset within a five- to seven-year window among people over 60. The study was scheduled to be presented July 12 at the Alzheimer's Association 2009 International Conference on Alzheimer's Disease, held in Vienna, Austria. If borne out through additional research, a doctor could evaluate a patient based on age, especially among those over age 60, their **APOE** genotype and their **TOMM40** status to calculate



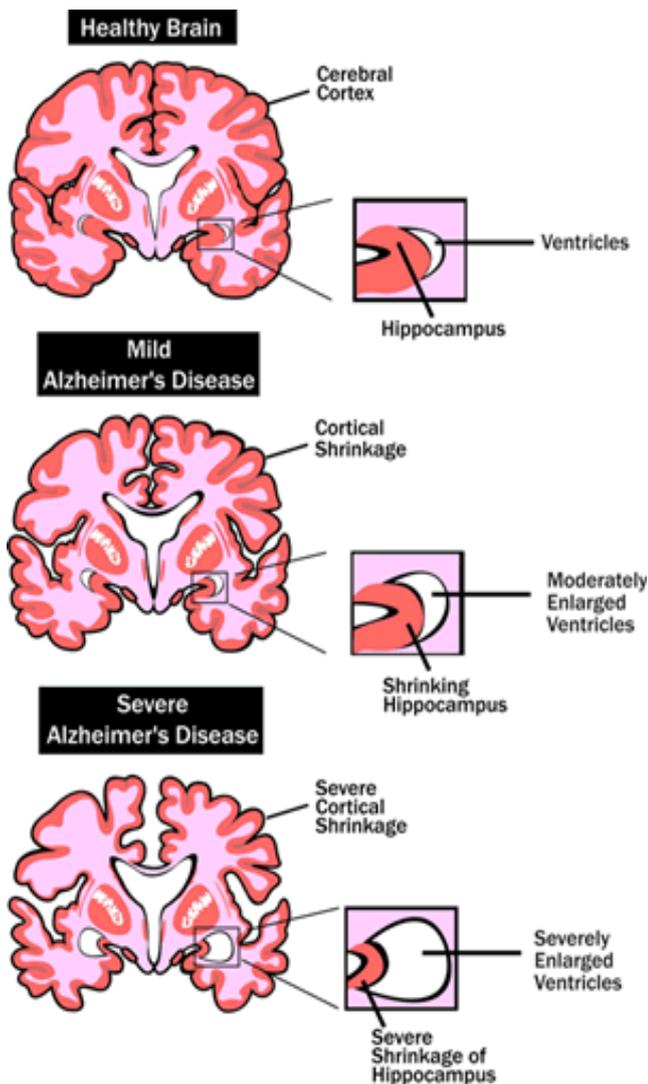
an estimated disease risk and age of onset," lead author Dr. Allen Roses, director of the Deane Drug Discovery Institute at Duke, said in a university news release. In previous research, Roses found that **apo-lipoprotein E (APOE)** genotypes, particularly **APOE4**, are associated with increased risk and younger age of development of Alzheimer's disease. **APOE4** accounts for about 50 percent of late-onset cases of Alzheimer's, but the cause of the remainder of cases hasn't been known.

It now looks fairly clear that there are two major genes -- **APOE4** and **TOMM40** -- and together they account for an estimated 85 to 90 percent of the genetic effect," Roses said. The Duke team is planning a five-year study of **APOE** genotypes and **TOMM40**, along with a drug trial to assess prevention or delay of Alzheimer's disease onset.

Compounded by Noha Gamal

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