



APEX BEE COMPANY LLC

"Bee-Friendly, Bee-Healthy"™

Honey and Your Health

A Treatise on the Health Benefits of Honey and Hive Products

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¹ The findings in this publication are the opinions of the publisher and have not been reviewed by the medical community unless referenced herein.

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Honey and Your Health

Skin Care Remedies

All ancient cultures used honey as a wound dressing. It was the standard of choice in modern society until the rise of antibiotics in the 1940's.

Honey is one of the great anti-microbial substances on the planet. It kills bacteria, fungi, and other microorganisms.

Like other sugars, honey is hygroscopic—it draws moisture, enhancing its anti-microbial qualities. Smear a layer of honey on a colony of germs and it sucks the moisture out of them. They shrivel and die.

Pure honey contains the enzyme glucose oxidase which causes a chemical reaction that releases hydrogen peroxide which is known for its antiseptic capabilities.

Honey nurtures new cell growth. In a study of burn victims, eighty-seven percent of those treated with honey had fully recovered in fifteen days, compared with just ten percent of those treated with antibiotic creams.

Apply honey directly to a wound every 12 to 24 hours and cover it with sterile gauze.

Cold Medicines

Researchers at Penn State found that a single dose of buckwheat honey (chosen due to its high antioxidant contents) was significantly more effective than Dextromethorphan² (found in Robitussin™ and most over the counter (OTC) cold suppressants). They were not sure if honey's antioxidant, anti-microbial, or throat-coating properties were responsible, but all the honey related patients slept better.

Antibiotic Properties

Recent research from the Department of Medical Microbiology at the Academic Medical Center in Amsterdam shows that the Defensin-1 protein added to honey by bees, possesses potent antibacterial properties and could be used against drug resistant bacteria.

The study indicates that this protein could one day be used to treat burns and skin infections. The information also sheds light on the inner workings of honey bee immune systems.

² "FDA examines cough medicine abuse", *USA Today*, 9/1/2010, p1D. - Dextromethorphan is found in more than 100 OTC medications according to the FDA and was linked to nearly 8,000 emergency room visits in 2008.

Honey and Your Health

Research results published in *Phytotherapy Research Journal* report that two compounds isolated from honey bee produced propolis, — Propolin C and Propolin D have proved to be very effective against the virulent MRSA strains. As MRSA becomes increasingly resistant to the antibiotic Vancomycin, new compounds are needed to combat the virus as it mutates.

Liver Functions and Stress Relief

Glycogen, manufactured in the liver is required at all times by your brain, yet at any given moment the brain has only a thirty second supply. The liver steadily feeds glycogen all day and night, but the liver can only store about eight hours worth.

If you eat an early dinner and then nothing before bed, your liver runs out of glycogen which sends your brain into a stress induced panic. Stress hormones flood the system, particularly Cortisol. In effect your body melts down muscle tissue to get the glycogen your brain needs.

This keeps your brain going through the night but prevents restorative sleep which your body needs to repair and build immune cells. Your heart beats faster, and glucose and insulin levels are elevated. Fats get stored instead of metabolized.

The key to preventing this chain reaction is to fully fuel your liver before you go to bed. As you probably have guessed, honey is the answer! It doesn't take much, just one hundred calories—divided between fructose and glucose sugars.

One - two tablespoons of honey before bed promotes deep restful sleep, weight loss, and long-term health.

Honey has a much lower glycemic index (see below)—the rate at which food is absorbed by the blood system. This small amount provides the fuel your liver needs to make glycogen all night.

Honey and Your Health

Glycemic Index of Honey and Sugar - A Comparison

Do you know how much sugar you are ingesting today? Understanding the Glycemic Index of honey and sugar could help you better watch your daily sugar consumption

Table sugar (chemist calls it "sucrose") which is made from two simple sugars called glucose and fructose, is being processed into many foods such as cereals, bread, mayonnaise, jam, peanut butter, and ketchup.

The Glycemic Index which is assigned to each food, measures how much a given food affects blood-glucose levels. The lower the rating, the slower the absorption and digestion process, which means a more gradual and healthier infusion of sugars into the bloodstream, whereas, a high rating means that blood-glucose levels are increased quickly, and the pancreas is stimulated to release insulin to keep blood-sugar at a constant and safe level, and this inhibits the release of growth hormones, which in turn depresses the immune system. An influx of sugar into the bloodstream not only upsets the body's blood-sugar balance, the insulin secreted also promotes the storage of fat and weight gain which has been linked to obesity and cardiovascular diseases. Complex carbohydrates such as fruits and vegetables tend to be absorbed more slowly, lessening the impact on blood-sugar levels, and hence form an important part of the diet of those who are trying to lose weight.

Glycemic index is of special significance to diabetic people, but also has important health implications for people in general. Low GI diets have been reported to lead to improved insulin responses and blood cholesterol level. Studies show that honey has a lower glycemic index than table sugar and therefore provides a relatively longer and steadier source of energy.

Now here is the Glycemic Index of honey and sugar:

- Honey's Glycemic Index: 55
- Sucrose's Glycemic Index: 61

And remember, you are what you eat.

Honey and Your Health

Allergies and Local Honey

The use of locally harvested honey has proven to be very effective against many pollen-based allergies. Local honey contains a small amount of local pollen (protein). Although there have not been a lot of funded studies, anecdotal evidence indicates that if local honey is taken for a period of time prior to the pollen season, relief is possible for allergy sufferers.

If you use local honey collected during those periods when your allergies are the most prevalent, you are ingesting the very pollen spores that cause your discomfort. Your immune system has the opportunity to produce the antibodies needed to build your resistance.

At least one informal (unfunded) study on allergies and honey conducted by students at Xavier University in New Orleans produced positive results.

Researchers divided participants into three groups: seasonal allergy sufferers, year-round allergy sufferers and non-allergy sufferers. These groups were further divided into three subgroups with some people taking two teaspoons of local honey per day, others taking the same amount of non-local honey each day and the final subgroup not taking honey at all. The Xavier students found that after six weeks, allergy sufferers from both categories suffered fewer symptoms and that the group taking local honey reported the most improvement.

The study was never published, but the anecdotal evidence in favor of honey as an allergy reliever continues.

Ask your local beekeeper about the floral source of his/her honey.

The Wonders of Bee Pollen

By Lady Spirit Moon

Bee pollen contains all known enzymes, at least 22 amino acids, 18 vitamins, 25 minerals, 59 trace elements, 14 fatty acids, 11 carbohydrates and is approximately 25% protein.

Bee pollen is a probiotic for honeybees; honey is their prebiotic. Bee pollen is extremely rich in carotenes, which are metabolic precursors of Vitamin A, is high in B complex, Vitamin C, Vitamin E, and Lecithin.

³ Please consult your physician or allergist before using any anti-allergy compounds.

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Bee pollen contains over 50% more protein than beef, yet it's fat content is very low. It is also an excellent vegetarian source of protein, typically possessing more of the essential amino acids, pound for pound, than animal proteins like meat, eggs, and dairy products.

It improves brain function, eyes, and the digestive tract. Strengthens capillaries and protects the body against the negative effects of chemotherapy.

Just a few grains ingested can detect allergies.

Buy Raw Honey with the pollen in it! Ask your beekeeper how he processes the honey you are buying. The largest pollen grains are about 200 microns in size. When honey is strained (and it should never be filtered) the strainer should be larger than 200 microns to allow the pollen to fall through.

Prostate Cancer Treatment

Proteomics reveals how ancient remedy slows prostate tumor cell proliferation—

An over-the-counter natural remedy derived from honeybee hives arrests the growth of prostate cancer cells and tumors in mice, according to a new paper from researchers at the University of Chicago Medicine. Caffeic Acid Phenethyl Ester, or CAPE, is a compound isolated from honeybee hive propolis, the resin used by bees to patch up holes in hives. Propolis has been used for centuries as a natural remedy for conditions ranging from sore throats and allergies to burns and cancer. But the compound has not gained acceptance in the clinic due to scientific questions about its effect on cells.

In a paper published in *Cancer Prevention Research*, researchers combined traditional cancer research methods with cutting-edge proteomics to find that CAPE arrests early-stage prostate cancer by shutting down the tumor cells' system for detecting sources of nutrition.

"If you feed CAPE to mice daily, their tumors will stop growing. After several weeks, if you stop the treatment, the tumors will begin to grow again at their original pace," said Richard B. Jones, PhD, assistant professor in the Ben May Department for Cancer Research and Institute for Genomics and Systems Biology and senior author of the study. "So it doesn't kill the cancer, but it basically will indefinitely stop prostate cancer proliferation."

Honey and Your Health

Honey Bee Studies related to Dementia

Older honey bees effectively reverse brain aging when they take on nest responsibilities typically handled by much younger bees, scientists at Arizona State University have found. While current research on human age related dementia focuses on potential new drug treatments, researchers said that these findings suggest that social interventions may be used to slow or treat age-related dementia.

In a study, a team of scientists from ASU and the Norwegian University of Life Sciences, led by Gro Amdam, an associate professor in ASU's School of Life Sciences, showed that tricking older, foraging bees into doing social tasks inside the nest causes changes in the molecular structure of their brains.

They found Prx6, a protein also found in humans that can help protect against dementia – including diseases such as Alzheimer's – and they discovered a second and documented "chaperone" protein that protects other proteins from being damaged when brain or other tissues are exposed to cell-level stress.

"Maybe social interventions – changing how you deal with your surroundings – is something we can do today. Bees can turn back time and reverse brain aging - and maybe help our brains stay younger," said Amdam. "Since the proteins being researched in people are the same proteins bees have, these proteins may be able to spontaneously respond to specific social experiences," he added.

Honey is the only food that contains pinocembrin, an antioxidant associated with improved brain functioning.

Other Published Studies on Honey

Honey in barbeque sauce prevents the carcinogenic effects of grilled meat. If you grill, baste with honey.

Honey's natural anti-inflammatory properties made it as effective as Prednisone in treating Inflammatory Bowel Disease.

Forty percent of cancer patients fed honey needed no Colony-Stimulating Factor to boost their immune systems following chemotherapy.

Honey is an effective probiotic; boosting the populations of good bacteria

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in the gut.

Bee Stings

To relieve the pain and swelling from a bee sting place a penny on the sting site for fifteen minutes immediately after getting stung. Try holding it in place with a Band-Aid. You will be amazed how well this works.

How to Measure Honey Accurately

Do you know how to measure honey accurately for baking or cooking without the unwanted sticky mess?

If you have baked or cooked something with a relatively big quantity of honey before (more than a teaspoon or tablespoon), you probably have encountered this question. Following is a method to do it neatly. Try it!

1. Using a measuring cup, smear or brush the inside walls of the cup with cooking/baking oil all around thinly and evenly. (Note: There are also now convenient baking oil spray canisters available in the supermarkets.)
2. Pour the amount of honey required into the measuring cup.
3. The thin layer of oil prevents the honey from sticking onto the cup. You can now easily pour out the honey from the measuring cup without having any stuck to the cup or having the need to scrap out the remaining from the cup so as to accurately obtain the amount of honey as instructed in the recipe.

Note: All studies used "Raw" honey, which is unheated and only lightly strained which retains its natural properties. If you heat it, you kill it.

For more information check out—

Committee for the Promotion of Honey and Health at: Benefits of Honey
at:

<http://www.benefits-of-honey.com/>

National Honey Board at:

www.honey.com

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Honey Composition

	Ingredients	
	%	Avg.
Water	12.4 - 26.9	17.7
Fructose	40.2 - 48.6	40.5
Glucose	24.7 - 36.9	34.0
Sucrose	0.0 - 10.0	1.9
Ash	.03 - .9	.18
Acids	.04 - .25	.09

Variable amounts of:

Thiamine
Riboflavin
Ascorbic Acid
Pyridoxine
Pantothenic Acid
Nicotinic Acid (Niacin)
Biotin Acid
Folic Acid
Vitamin K

Minerals

Iron
Calcium
Sodium
Sulfur
Magnesium
Phosphorus

Honey's Specific Gravity⁴ = 1.41 - 1.45

Honey's Specific Weight = 12-11.75 pounds per Gallon

Note: Water weighs 8.3 pounds per gallon with a specific gravity of 1.0

⁴ The quotient of the measure of the mass of honey, divided by the measure of the mass of an equal volume of water at 4°C.