

Manufacturing and Marketing of Goat's Milk - Kefir

Product Description¹

Kefir is a fermented milk product historically used for the promotion and maintenance of good health in Eastern Europe and Russia. It is produced utilizing goat's milk, cow's milk, soy milk, or coconut milk – but is reputed to be of most benefit when made with goats milk. It is easily digestible, and is a good source of protein and calcium. Kefir can therefore be included as part of the dairy product portion of the diet.

Kefir is similar to a milkshake or smoothie and contains microorganisms known as “probiotics.” These live and active cultures have been shown to restore essential intestinal flora diminished by everyday use of antibiotics to travel, stress and alcohol consumption.

History and Background

The drink is said to originate in the Caucasus Mountains of Russia where people live well past 100 years, and the word kefir is thought to have been derived from the Turkish word "Keif" for "good feeling".

It is generally thought that kefir was first discovered by nomadic shepherds who noticed the fermenting of the fresh milk they carried in leather sacks. Since its first appearance in the Caucasus Mountains, kefir has been credited with possessing a wide array of health benefits. Depending on the source, everything from cancer to a hangover can be improved by kefir consumption.

¹ Sources: www.kefir.net; www.lifeway.net; www.liberte.qc.ca; www.medicinalfoodnews.com; Mr M. Louca; The Kalahari Kid Corporation.

Health Benefits

Some of the more common health benefits of kefir include:

- Balancing the levels of "good" and "bad" bacteria in the intestinal tract, thereby preventing infections.
- Boosting the immune system.
- Easing digestion, especially for those with lactose intolerance.
- Controlling cholesterol levels, maintaining heart health.

Easily digested, kefir cleanses the intestines, provides beneficial bacteria and yeast, vitamins and minerals, and complete proteins. Because kefir is such a balanced and nourishing food, it contributes to a healthy immune system and has been used to help patients suffering from AIDS, chronic fatigue syndrome, herpes, and cancer. It's tranquilizing effect on the nervous system has benefited many who suffer from sleep disorders, depression, and ADHD (attention deficit hyperactivity disorder).

The regular use of kefir can help relieve all intestinal disorders, promote bowel movement, reduce flatulence and create a healthier digestive system. In addition, its cleansing effect on the whole body helps to establish a balanced inner ecosystem for optimum health and longevity. Kefir can also help eliminate unhealthy food cravings by making the body more nourished and balanced. It's excellent nutritional content offers healing and health-maintenance benefits to people in every type of condition.

In addition to beneficial bacteria and yeast, kefir contains minerals and essential amino acids that help the body with healing and maintenance functions. The complete proteins in kefir are partially digested and therefore more easily utilized by the body. Tryptophan, one of the essential amino acids abundant in kefir, is well known for its relaxing effect on the nervous system.

Because kefir also offers an abundance of calcium and magnesium, which are also important minerals for a healthy nervous system, kefir in the diet can have a particularly profound calming effect on the nerves.

Kefir's ample supply of phosphorus, the second most abundant mineral in our bodies, helps utilize carbohydrates, fats, and proteins for cell growth, maintenance and energy.

Kefir is rich in Vitamin B12, B1, and Vitamin K. It is an excellent source of biotin, a B Vitamin which aids the body's assimilation of other B Vitamins, such as folic acid, pantothenic acid, and B12. The numerous benefits of maintaining adequate B vitamin intake range from regulation of the kidneys, liver and nervous system to helping relieve skin disorders, boost energy and promote longevity.

Beyond the medical research that has buoyed kefir in recent years, stories periodically emerge adding to the aura of health surrounding kefir. Canadian researcher Ted Farnworth has called it "the champagne of dairy products" because of its naturally fizzy taste and seemingly endless list of health benefits. Pet shops have fed it to sick animals, Marco Polo mentioned it in his writings, patients recovering from abdominal surgery are encouraged to consume it. Some claim it prevents the development of allergies, helps achieve a glowing complexion and builds resistance to the common cold.

Studies on Kefir

Since Nobel laureate Elie Metchnikoff began studying the benefits of kefir in the early 1900s, a variety of research has credited the product's natural bacteria cultures with positive effects such as easing digestion, improving lactose intolerance, boosting immunity, and significantly reducing the severity and duration of diarrhea caused by treatment with antibiotics.

Russians believe that the regular consumption of kefir improves overall health, helps fight disease and infection and speeds recovery from illness and injury. Russian scientific and medical literature has many articles on the use of kefir for a wide variety of diseases and infections. It is apparent that in the ex-Soviet countries kefir has been used in the

treatment of peptic ulcers, biliary tract diseases, chronic enteritis, bronchitis and pneumonia. It is customary for patients in Russian hospitals to receive kefir each day during their stay in the hospital. New mothers are particularly encouraged to eat kefir and kefir is often used as a weaning food for Russian babies.

It has been shown that kefir grains have broad anti-tumoural, antibacterial and antifungal properties. These wide-ranging properties may explain the reason for kefir's usage in numerous and seemingly unrelated numbers of diseases and illnesses.

Experimental work carried out in Japan has shown that the consumption of kefir or kefir grains can protect the body against a cancer challenge. If the kefir is consumed before exposure to the carcinogen, the incidence of animals developing the cancer is reduced. If the kefir follows exposure to the carcinogen the growth and speed of growth of the cancer is reduced. To date, there have been no scientific publications on the use of kefir for combating cancer in human subjects (in vivo).

Micro-organisms found in Kefir

Lifeway Foods, an American company producing Kefir commercially since 1985, has listed the following micro-organisms (and associated benefits) as being present in it's product:

Streptococcus lactis:

Produces L (+) lactic acid

Produces large quantity of lactic acid

Partially hydrolyses milk proteins

Increases digestibility of milk

Improves stomachal digestion

Inhibits harmful microorganisms

Produces bacteriolysins

Streptococcus cremoris:

Has the same properties of Streptococcus lactis

Is more resistant moreover to phages than streptococcus lactis

Increase desirable flavor of kefir

Streptococcus diacetylactis:

Has the same properties of Streptococcus lactis

Produces diacetyl and CO₂. Diacetyl is a characteristic aroma of kefir

Leuconostoc cremoris:

Produces lactic and acetic acid

Produces acetyl-methyl carbinol and diacetyl, two aromatic agents of kefir.

Lactobacillus plantarum:

Exhibits antagonistic activity against Listeria monocytogenes

Produces plantaricin, a bacteriocin inhibiting microorganisms which cause spoilage.

Strong producer of lactic acid.

Tolerates high concentrations of bile salts

Adheres to intestinal mucosa

Lactobacillus casei:

Produces L (+) lactic acid

Produces large quantities of lactic acid

Colonizes intestinal tract

Adheres to intestinal mucosa

Creates a favorable environment for the desirable microbial balance

Limits intestinal putrefaction, thus controlling production of toxins and their noxious effect upon vital organs and body cells

Inhibits pathogenic bacteria and prevents diseases caused by intestinal infections.

Limits lactose intolerance. Contributes to Immunity.

The commercialization of Kefir

A number of companies globally currently produce and market kefir and kefir-based products. These are to be found in both Eastern and Western Europe, the United States and Canada, and Russia and the Far East. The most notable example of successful commercialization is probably Lifeway Foods, based in Illinois, USA. The company began as a basement production facility in Chicago in 1985, and grew fast enough to list on the NASDAQ by 1988, where it has remained, under the symbol LWAY. Around 1996, Lifeway undertook three expansions, and became the largest manufacturer of kefir and associated products in the United States. Interest was then expressed by the Danone Groupe (the French dairy company who has partnered with Clover in South Africa), who then acquired and continues to hold a 20% stake in the company.