

Health Benefits of Kefir: A Fermented Beverage

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Abstract: *Kefir is simply fermented milk made from kefir grains and kefir cultures because no other dairy products are used. Kefir rice is a blend of beneficial bacteria and yeast with a polysaccharide matrix. During fermentation, lactic acid, CO₂, ethyl alcohol, and aromatic compounds produce their unique organoleptic properties. Kefir has been used in Russia for many years to treat or prevent many diseases. It has begun to be used for nutritional and medicinal aspects in some parts of the world, Southwest Asia, Northeast Europe, North America, and Japan. This paper attempts to review the consumption, processing, and chemical composition of kefir and the health benefits of kefir. Kefir has many beneficial properties so it is positioned as a natural probiotic or natural healing and immune booster and has proven to be the yogurt of the 21st century. Kefir is much more beneficial than real yogurt and works so well to support and boost our immune system. Kefir is becoming increasingly popular thanks to new research on its health benefits. Kefir is believed to have healing properties, so it is important to study its qualities and manifestations. Included in this review is a critical review of kefir's anti-bacterial, anti-cancer, probiotic, and prebiotic properties, in addition to other health benefits such as cholesterol reduction and lactose stabilization*

Keywords: Kefir, Probiotic, Skim milk, Immune system, Fat

I. INTRODUCTION

In recent years, skim milk and dairy products have had a significant impact on health. It is believed to be useful with various therapeutic and other properties. The researchers found another fermented dairy drink, kefir. The word 'kefir' comes from the Turkish word 'keif' which means 'good feeling'. The drink originated in the Caucasus Mountains of Russia between the Black Sea and the Caspian Sea. Kefir is produced by the production of lactic acid and alcohol by bacteria and yeast. It can also be made by infusing milk with kefir seeds to combine bacteria and yeast. Kefir contains vitamins, amino acids, carbon dioxide, acetoin, alcohol, and essential oils with proven health benefits many benefits. Kefir is considered good for health in the long term (Liu et al., 2006 a). Guven et al. (2003) proposed an alternative to the neuroprotective potential of kefir. Several studies have shown evidence to support the use of kefir and other probiotic foods for the treatment of gastrointestinal disorders. One example is acne, which can be caused by various conditions. Probiotics help prevent constipation and reduce the duration; They also relieve infant diarrhea, irritable bowel syndrome, stomach upset, and sick travelers. The consumption of kefir has shown to be the best in reducing the symptoms of chronic constipation. This review describes the properties and benefits of kefir and its effects related to health and m Kefir is made from the milk of cows, sheep, goats, and cows. In some countries, however, animal milk is scarce, expensive, or limited due to dietary restrictions, preferences, or religious practices, so many attempts have been made to produce kefir from various food sources, such as soymilk Historically, kefir is associated with health, for example in Soviet countries, kefir is recommended for consumption by healthy people to prevent the risk of certain diseases Consumption of this fermented milk is not health benefits not only related to its microorganisms but also by the presence of some metabolic products as organic acids Cholesterol It has the ability to normalize. Kefir has outstanding benefits such as antitumor, antifungal, antibacterial properties, anti-inflammatory, healing, and antioxidant activity medicine.

Origin of Kefir:

Kefir is a traditional and popular Middle Eastern beverage. Drinking kefir makes him 'feel good' (Chaitow and Trenev, 2002). It originated in the Caucasus Mountains and Central Asia in the former Soviet Union and is thousands of years old. Kefir grains were first mentioned by the tribes of the North Caucasian mountainous region of Russia. Historically, kefir grains were considered a gift from Allah among Muslims in the Caucasian Highlands. They were passed down

from generation to generation among the Caucasian tribes and were considered a source of family wealth. Authentic traditional kefir can be made using fresh or pasteurized milk made from kefir grains in households around the world. There are many methods of making kefir usually using a traditional technical process. Food scientists are now studying modern methods of producing kefir with properties similar to those found in traditional kefir. Kefir can be made from any milk, cow, goat, sheep, coconut, rice, or soy. There are many options for breastfeeding; pasteurized, unpasteurized, full fat, low fat, skim, and no fat (Semih, and Cagindi, 2003). Similarly, many methods have been developed for making kefir-like beverages without the use of grain. In Russia, mother culture is created by fermenting the traditional kefir and sifting the grain. About 1 to 3% of this mother culture is added to pasteurized milk and incubated at 19 to 28°C for 24 hours.(Farnworth & Manville, 2003).

Benefits of Kefir for Pregnant and Nursing Women

According to the National Kefir Association, pregnant and breastfeeding women can safely consume kefir. It improves nutrient absorption, boosts immunity, boosts metabolism, prevents diseases like yeast overgrowth, and even prevents group B beta streptococcus. Increases even more when pregnant women drink kefir in their mouths. Beta streptococcus is a harmful bacteria that can cause sepsis, pneumonia, and meningitis

Side Effects of Kefir

Taken orally: Kefir may be unsafe for most adults after up to 12 weeks of consumption. Some side effects of kefir include bloating, nausea, intestinal congestion, and constipation, especially when first started. These side effects usually resolve with continued use

Consumption of Kefir

Kefir has been cultivated for thousands of years and originated in the Caucasus Mountains of the former Soviet Union. Although kefir has only just been discovered in some parts of the world, it has been very popular for years in the former Soviet Union, Hungary, and Poland. It is popular in Sweden, Norway, Finland, and Germany as well as Greece, Austria, Brazil, and Israel. It is growing in the United States and Japan. Many countries also have kefir-related products. Some are made with fortified milk and fermented with traditional rice Freeze dried kefir, and Buttermilk kefir which is a traditional product made with skimmed milk

Cultured milk kefir, made from a special blend of baker's yeast combined with a cream or yogurt starter culture, is a kefir-like substance, made from a mixture of microorganisms that produce a variety of sensations, but without the unique characteristics of it is traditional kefir; Products in this category are known as omaere (in the southwestern United States), rob or roba (in some Arab countries), kazaklder majiokik (in Norway), kellerlich (in Germany), tarag (in Mongolia) and kefir (in Turkey)

When converted into osoby, kefir is lower in fat than cow's milk in Russia, but high in protein. Although cow, buffalo, and sheep milk are widely used for the production of several types of fermented milk, there is limited information on the sensory properties of kefir made from different dairy milks

Kefir Grains:

Kefir is made exclusively from kefir grains or the mother culture from which the kefir grains were made. Kefir is produced in goatskin pouches filled with pasteurized milk infused with sheep intestinal flora, followed by cultures in the milk surface that gradually expose the poly-foliate layer of the skin. The skins are removed and sprinkled on pasteurized milk. Kefir seeds appear as shell fragments or small clumps of cauliflower flowers or popcorn, ranging in size from 3mm to 20mm

Milk Kefir grains :

Granules of lactic acid bacteria, acetic acid bacteria, and mixed yeasts are described as associations with casein (milk protein) and complex sugars together through a polycystic matrix. The overall structure of rice microorganisms is not entirely clear

Kefir process :

There are many ways to make kefir. Typically, traditional and industrial methods are used and food scientists are now studying modern methods of producing kefir with the same properties found in traditional kefir. Kefir can be made from any kind of milk, cow, goat, lamb, coconut, rice or soy. There are many options for breastfeeding; Pasteurized, unpasteurized, full fat, low fat, skim, and no fat.

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Traditional Process:

The traditional method of making kefir is by adding kefir grains directly. Raw milk is boiled, cooled to 20-25°C and 2-10% (usually 5%) kefir grains are added. After heating for 18-24 hours at 20-25 degrees Celsius, the grains are separated from the milk by sieving through a sieve, which can then be dried at room temperature for consumption role in inoculating, Kefir is stored at 4 degrees Celsius for a period of time and then ready for consumption

Industrial process:

Different techniques can be used in the production of industrial kefir but are essentially based on the same principles. The first step is to homogenize the milk to 8% dry matter and hold it by heat treatment at 90-95°C for 5-10 minutes. The tank was then cooled to 18-24°C and 2-8% kefir cultures (bacterial starters) were added. The treatment time is changed from 18 hours to 24 hours. The coagulation is separated by fumigation and distributed in bottles. After maturing at 12-14°C or 3-10°C for 24 hours, the kefir is stored at 4°C.

Objectives:

To understand the composition and production of kefir.

To study human digestive health benefits of kefir on people post-consumption

II. LITERATURE REVIEW

(S. Sarkar, 2007)

Kefir granules, kefir starter, and kefir drinks vary widely in bacteria, yeast, and microorganisms. Kefir's nutritional properties come from its chemical properties such as vitamins, proteins, minerals, and fermentation providing a further enhancement to its nutritional value. Kefir exhibits healing properties due to having various healing properties. Kefir can be recommended for healthy sick adults as well as infants as a diet drink.

(S. Otles, O. Cagindi, 2003)

Kefir is rich in nutrients and has many health benefits; So premature infants, young children, pregnant women, nursing mothers, patients, the elderly, and lactase deficient. Many researchers have investigated many kefir qualities but most of them were explained in detail.

(S. M. John, S. Deeseenthum, 2015)

Scientific research shows that kefir is a powerful pro-bacteria, which is a combination of bacteria and yeast. Kefir has certainly been shown to have a variety of activities including antibacterial, anti-carcinogenic, probiotic properties, and more. It provides health benefits in reducing cholesterol effects and improving lactose tolerance in humans.

(MR Prado, 2015).

Kefir, a traditional beverage, is now recognized as a potential source of probiotics and molecules with very interesting health properties. Careful and detailed characterization of kefir helped the scientists find new uses. Kefiran, (microbial exopolysaccharide) kefir EPS, has very important physicochemical and rheological properties. In addition, its biological properties indicate its use as an anti-inflammatory, anti-tumor, antiviral, and immune modulator, among other activities. Research is constantly being done to enhance the properties of kefir and kefir in order to develop important new products to preserve the health of the consumer.

(M. Gurr, 1991).

Although it reflects the 'healthiness' of processed milk, the scientific basis for many of the claims is elusive. Published evidence that lactase-deficient humans are better able to tolerate lactose in kefir than equivalent amounts of lactose in milk is consistent although the mechanism remains unclear.

III. CONCLUSION

Kefir is a fermented beverage from Russia that is beneficial for the health of many diseases and is now popular in every country. According to the survey, it is not that popular in Mumbai and not many people know about it. It is useful for curing and slowing diseases but its excessive dose may be harmful to people in Mumbai.

Kefir is a popular ethnic dairy that continues to grow; Taste, milk type, fibers, grains, and many other additives have been tested for the market. Kefir is made from a variety of milk types (cow, goat, camel, cow, or horse), usually with a blend of two types of milk to maximize its benefits, flavor, and texture, and secondary fermentation or additives such as inulin are added to improve the properties of the final product. Another way to make kefir is to make sugar into raw

sugar or fruits or vegetables without using dairy This product is called sugary kefir. These additives and various manufacturing processes influence the physicochemical properties and health benefits of kefir besides affecting the taste Consider the type used, kefir grains, and production fermentation conditions (time and temperature) that must be monitored during production because any changes in these variables can affect kefir chemistry and microbial composition

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