Kimchi
Ideal Health Food for a Well-being Lifestyle

Recent research findings, which confirm kimchi’s efficacy for promoting good health, have boosted its popularity as an ideal health food. A rich source of lactobacilli and diverse nutrients, kimchi can help to prevent cancer and arteriosclerosis, and slow the aging process.

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In 2006, the American magazine *Health* designated kimchi as one of the top-five healthiest foods in the world, along with olive oil, soy, lentils, and yogurt. In the *Health* article, kimchi was praised for being high in fiber, helpful for dieting, and rich in vitamins A, B, and C, as well as healthful lactobacilli, which is effective for preventing cancer. Moreover, the health benefits of kimchi have been proven in a growing number of scientific studies.

**Nutritional Benefits**

There are numerous types of kimchi, depending on the ingredients used, but when Koreans mention “kimchi,” they are usually referring to Chinese cabbage kimchi, the most common type. With only 18 kcal per 100 grams, kimchi is a low-calorie food, and a plentiful source of dietary fiber. Regular intake of dietary fiber helps to prevent constipation, reduce bad cholesterol, and cleanse the body’s systems. Kimchi is also a rich source of vitamins and minerals, including vitamin C and beta-carotene, while various B vitamins are synthesized during the fermentation process. It is also high in calcium, iron, and phosphorus, which contribute to strengthened bones and reduced anemia.

As for garlic, an essential ingredient of kimchi, it contains allicin, a compound with potent antibacterial properties. The global media began to take keen notice when kimchi was cited as one of the factors behind Korea’s ability to largely escape the impact of the SARS (severe acute respiratory syndrome) and avian flu outbreaks, which had afflicted certain countries in Asia in recent years. Garlic enables the body to retain vitamin B1 (thiamine) for a longer time, which helps to boost energy and create a sense of calm.

Red chili pepper, which is essential for seasoning kimchi, has a higher content of vitamin C than any vegetable, and helps to inhibit the growth of harmful microorganisms, thereby aiding in the production of lactobacilli during fermentation. In fact, the inclusion of red chili pepper significantly bolsters the overall nutritional value of kimchi. And, in conjunction with garlic, these two ingredients help to maximize kimchi’s anti-cancer effects.

Kimchi is also ideal for weight control, because it is made primarily from vegetables that are low in calories and high in dietary fiber. Of particular note, capsaicin, the active component of red chili pepper, helps to speed up the body’s metabolism and burn off fat. The addition of red chili pepper to kimchi produces optimal benefits for weight loss, according to an experiment that found, when white mice were fed a high-fat diet, together with kimchi, they experienced only minimal weight gain. Moreover, a number of the various microorganisms created during the fermentation process have yet to be care-
fully studied, which could result in the discovery of new kimchi-related health and dietary benefits.

**Miraculous Fermentation**

Kimchi is the result of a natural fermentation process that accounts for its pungent aroma and savory taste, which are enhanced at the peak of its maturity. In addition to the nutritional value of the original kimchi ingredients, the fermentation produces lactobacilli and other nutrients as a result of the interaction of microorganisms. Through a seemingly miraculous fermentation process, which includes the synthesis of lactobacilli, the presence of vitamins B and C, and nutrients such as organic acids and amino acids, are increased to far higher levels than that of the original ingredients. A single gram of kimchi can contain up to 100 million lactobacilli, a content level four times higher than that of yogurt.

The lactobacilli, lactic acid, acetic acid, and other organic acids produced during the fermentation of kimchi are especially beneficial for your digestive system, in regard to relieving constipation as well as inhibiting the growth of mutated cells and the development of tumors in the intestinal tract, thus helping to prevent colon cancer. Also, lactobacilli and organic acids revitalize the skin and create collagen, for a healthier looking skin, along with functioning as an antioxidant to retard the effects of aging. These nutrients also help to strengthen the immune system and the body’s resistance to toxic elements. Of note, the lactobacilli and nutrients of kimchi, as well as its savory taste, reach a peak at the time of its proper fermentation (not under-fermented or over-fermented).

**Kimchi and Rice**

For Koreans, kimchi and rice go hand and hand. Because steamed white rice is most often served plain, kimchi makes a perfect side dish, thanks to its unique aroma, zesty spiciness, and bright color. With the pungent yet refreshing taste of a properly fermented

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**Health Benefits of Kimchi’s Key Ingredients**

**Chinese cabbage** - The most commonly used ingredient in kimchi, Chinese cabbage is about 95 percent water and low in calories. In addition to being rich in vitamins and minerals, it contains various other beneficial components, including methylmethionine, an activated form of methionine, which helps to mitigate arteriosclerosis, and methylsysteinsulfoxid, that reduces cholesterol.

**Radish** - Due to its alkaline content, radish helps to maintain a proper alkaline balance of body fluids. Radish is primarily water, along with various nutrients, such as vitamin C and enzymes that aid in digestion, when eaten raw. The vitamin C of radish is concentrated in its outer surface, so its nutritional value can be maintained by washing, but not peeling off, the skin.

**Red Chili Pepper** - This essential seasoning, which gives kimchi its trademark spiciness, is a vital source of capsaicin that contributes to the elimination of harmful bacteria and improvement of the digestive process, through the increased secretion of saliva and gastric juices. It is also helpful for accelerating the body’s various metabolic processes.
Kimchi, older-generation Koreans can thoroughly enjoy a satisfying meal of simply fresh-cooked rice and their favorite kimchi.

Salted seafood, the animal ingredient used to make kimchi, provides a source of protein. As kimchi ferments, the protein of the seafood breaks down into amino acids and calcium. In addition, the vegetables, which are the primary ingredient of kimchi, are rich in minerals, such as calcium, copper, phosphorus, iron, and salt, that aid in the body’s absorption of vitamin C and vitamin B1 (thiamine), which is particularly important for people whose diets are centered on rice as a staple.

Wondrous Health Food

The organic acids, lactobacilli, and dietary fiber of kimchi make it effective for the prevention of constipation and colon cancer, and its anti-cancer benefits are maximized when properly fermented. The consumption of kimchi restricts the production of carcinogens in the intestines, lowers the colon’s acidity level, and helps to prevent colon cancer. Having regular servings of kimchi can increase the lactobacilli level of the colon by 100 to 1,000 times. The lactobacilli in the dietary fiber of kimchi serve to boost apoptosis (targeted elimination) of cancer cells. Various studies of kimchi extracts have shown that they can inhibit the propagation of cancer cells and revitalize the body’s defensive cells. And, the capsaicin of red chili pepper has been found to enhance the immune system, inhibit cancer, and relieve inflammation.

Kimchi is also known to help prevent the contraction of virus-related diseases, such as SARS and avian flu. Cultured solutions of kimchi lactobacilli have been found to effectively prevent infection from the avian flu virus. Various studies are currently underway to determine the efficacy of kimchi’s lactobacilli to resist virus-borne illnesses. Kimchi also helps to lower cholesterol levels and break down fibrin, which causes blood clots, along with impeding arteriosclerosis.

Garlic - The primary active ingredient of garlic, allyl-sulfide, is said to be 15 times more effective as a sterilizing agent than carbonic acid. Garlic also promotes proper metabolism, alleviates pain, prevents constipation, and helps to draw out toxins. It is known to fend off various afflictions, such as tuberculosis, food poisoning, staphylococcus, and typhus, along with reducing the risk of arteriosclerosis and various cancers.

Green Onion - Although about 80 percent water, green onion is rich in calcium, phosphorus, iron, and vitamins. The green stalks are a source of vitamins A and C. The allyl sulfur compound, which gives green onion its characteristic tanginess, is capable of eradicating bacteria.

Ginger - Along with being 80 percent water, ginger contains various minerals. The distinctive aroma and spiciness of ginger are derived from its gingerol compounds, which aid in proper maintenance of the stomach, the body’s perspiration, and weight control.

Salt - As for its nutritional and physiological function, there is no substitute for salt. Upon entering the body, salt breaks down into sodium and chlorine, which are needed for your blood, digestive fluids, and tissue fluids to properly regulate osmotic pressure, acidity, and the nervous system. To maximize kimchi’s anti-cancer function, roasted salt should be used for making kimchi.

1 Ideally, kimchi should be stored at a temperature of about 5ºC for optimal flavor and nutrition. In order to maintain this temperature throughout the winter, the kimchi crocks would be wrapped with straw.

2 A traditional Korean home would maintain a storage area for kimchi, where the kimchi crocks were buried in the ground and covered with straw mats.