

The Benefits of Kimchi

1. Anti-cancer Effects and Heavy Metal Detoxification

A. Based on her research, Professor Miri Kim (Food Nutrition Department, Chungnam National University) found that the bio-chemicals (isocyanate and sulfide) contained in vegetables such as Chinese cabbage and radish are effective in preventing cancer and detoxifying heavy metals in liver, kidney, and small intestine.

B. Professor Kun Yung Park (Department of Food & Nutrition, Pusan National University) found that:

- The red hot pepper powder (full of vitamin A and C) contained in Kimchi suppresses the growth of cancer cells.
- Fibers in Kimchi detoxify toxins that cause cancer and prevent constipation.
- The organic acid, lactobacilli, and lactic acid--which are produced during the fermentation of Kimchi--suppress harmful bacteria and stimulate beneficial bacteria, prevent constipation, clean intestines and prevent colon cancer.

C. Professor Chajun Chang (Department of Pathology, Seoul National University College of Medicine) found that:

Capsaicin, which is contained in the red hot pepper powder of Kimchi, helps reduce the chance of developing lung cancer. Allicin, chemical contained in garlic, helps reduce the chance of developing liver, stomach, and thyroid cancer. In addition, the Indole-3-Carbinol contained in Chinese cabbage helps reduce the chance of developing stomach cancer.

D. Based on his research, Professor Ahn Sik Chung (Department of Biology at KAIST, Korea Advanced Institute of Science and Technology) found that Chlorophyll in Kimchi helps prevent cells from absorbing carcinogen.

** Garlic and red hot pepper powder in Kimchi kill bacteria that cause gastritis, such as Helicobacter Pylori.

**There is no proof that the spicy substances in Kimchi aggravate ulcer and gastritis: Jung Kwon Lee, M.D. Department of Family Medicine, Samsung Hospital

2. Increasing Immunity & Anti-Cancer Effect

A. Research from Kimchi Research Institute at Pusan National University regarding the Activity of Immune Cells

Experiment with Mice (Four Weeks)

High Cholesterol Diet	High Cholesterol Diet + Red Hot Pepper powder	Normal Diet	High Cholesterol Diet + Kimchi
55%	67%	68%	75%

B. Professor Rina Yu (Food and Nutrition Department, University of Ulsan) found that eating Kimchi made immune cells become more active and increased the number of antibodies.

C. Transplantation of cancer cell (Observation for 3 weeks)

A normal mouse	Weight of cancer cell 4.32g
A mouse fed with Kimchi extract	Weight of cancer cell 1.98g

3. Helps Prevent Cardiovascular Disease, Myocardial Infarction and Hardening of the Arteries

A. The researchers at Family Medicine Department of Seoul Asan Medical Center found that eating Kimchi lowers homocysteine in blood that causes blood vessel diseases, such as stricture of the heart and stroke.

*The blood test results from 670 people who visited Seoul Asan Medical Center revealed that people who ate Kimchi twice or three times a day had lower chances of having a heart attack.

B. Research team of Professor Young Sun Song (Food and Nutrition Department, Inje University)

Experiment with Mice

	Normal Food	Normal Food plus 3% of Kimchi	Normal Food plus 5% of Kimchi
Level of Cholesterol	88mg	74mg	67mg

→ Kimchi remarkably decreased the cholesterol level, which helped prevent the hardening of arteries.

D. When a rabbit with hardened arteries was fed with garlic from Kimchi for three months, its cholesterol level decreased from 70.5 mg to 25mg.

F. Kimchi also inhibited the formation of blood clots which, in turn, helps prevent myocardial infarction.

4. Slowing Down the Aging Process

A. Dr. Gab Soon Moon and Professor Young Soo Chun (Kimchi Research Institute at Pusan National University) discovered that Kimchi, after two weeks of fermentation, is abundant in anti-oxidation substances that slow down the aging of skin. Also, Kimchi inhibits oxidation of cells that occurs as a result of stress.

B. The researchers at Food and Nutrition Departments from Inje University, Pusan Women's College and Kyung Hee University found that Vitamin C, chlorophyll and β -Carotene in Kimchi prevent dry flaky skin, relieve the cell toxicity, protect the skin by protecting skin cells, and slow down the aging process for skin.

5. Diet effect & Prevent overweight

Professor Kon Young Choi (Food and Nutrition Department at Pusan National University) experimented the effect of Kimchi in preventing fatty liver and on weight loss.

Testing with mice for a month

	Normal Diet	High Cholesterol Diet	High Cholesterol Diet + 5 % Red Hot Pepper Powder	High Cholesterol Diet + Kimchi
Weight	302g	338g	311g	302g
Weight of liver	3.79g	4.39g	4.01g	3.69g

6. Usually, 1 g of well-fermented Kimchi produces more than 8 hundred million lactobacilli (4 times of lactobacilli from Yogurt.) These lactobacilli accelerate the activity of colon. They not only clean colon, but also prevent constipation, the inflammation of intestines, and colonitis.

7. Kimchi provides a variety of nutrition: Inorganic nitrogenous compounds such as calcium, copper, phosphor and iron. It is also rich in Vitamins, such as Vitamin A, C, B1 and B2

8. Kimchi is the alkaline food that prevents acidosis, acid blood due to the over-ingestion of meat and/or acidic food.

9. Kimchi helps lower cholesterol, thereby preventing diseases such as high blood pressure and diabetes.

10. Kimchi adjusts body rhythm and is beneficial while recovering from diseases.

11. Because Kimchi is fermented food, it is easy to digest and its nutritions are easily absorbed.

12. Since it is fermented, Kimchi has no harmful side effects because it is fermented. It may be helpful in preventing or fighting cancer.

**Kimchi tastes best and contains the most vitamins and nutrition when it is fermented at 2-7 degree Celcius for 2 to 3 weeks.