

# Kumquat juice is a unique drink to restore strength and restore youth

Tkacheva Natalia, phytotherapist, nutritionist

Eliseeva Tatyana, editor-in-chief of the EdaPlus.info project

*E-mail:* tkacheva.n@edaplus.info, eliseeva.t@edaplus.info

**Abstract.** Exotic miniature citrus fruits, resembling small plums in shape and size, and similar in taste to tangerines, have several names: *kumquat*, fortunella or *kinkan*. And they are also known to admirers under the name "golden tangerine". This is how the name "kumquat" is translated from Chinese. In addition to the fact that fruits have an original sweet and sour slightly spicy taste and an unusual shape, they are also a source of numerous trace elements. That is why tasty and healthy kumquat juice is recommended to be included in the diet of kids and adults as a mandatory vitamin supplement, especially during the difficult autumn-winter period of viruses and colds.

Keywords: kumquat, kumquat juice, useful properties, contraindications, composition, caloric content

## **Composition and calories**

Kumquat juice is 80.8% water, contains a small amount of fat and protein (0.86% and 1.88%). There are slightly more carbohydrates in its composition than in other citrus fruits familiar to us (15.9 grams per 100 grams of product <sup>[1]</sup>), which explains its higher calorie content (71 kcal versus 46 kcal of orange or 41 kcal of grapefruit juice). This fact must be taken into account when compiling a diet, if you strictly follow the figure and the number of calories consumed.

Kumquat juice contains many useful vitamins and minerals:

• Potassium (186 mg). It normalizes blood pressure <sup>[2]</sup>, stabilizes the water balance in the body, plays an important role in the functioning of the nervous system, prevents muscle spasms, and improves performance.

- <u>Calcium (62 mg)</u>. In addition to the fact that this chemical element is the basis of bone tissue (ensures its density and health) <sup>[3]</sup>, it is also responsible for blood clotting, normalization of blood pressure, the implementation of proper metabolic processes in the body, and reduces PMS symptoms.
- Magnesium (20 mg). Normalizes heart rate and blood sugar levels, improves bone growth <sup>[4]</sup>, helps the body fully absorb vitamin D, prevents seizures <sup>[5]</sup>, reduces joint pain.
- Phosphorus (19 mg). It improves metabolism, helps to fully assimilate many chemical elements, relieves pain in the muscles (eliminates cramps)<sup>[6]</sup>, improves mood and prevents the development of depression.
- Sodium (10 mg). The main component of blood plasma. It establishes the proper functioning of the whole organism: it maintains a harmonious balance of fluid in the body, prevents dehydration <sup>[7]</sup>, promotes the production of saliva and lymph, stabilizes the work of the nervous and muscular systems, etc.
- Vitamin C (43.9 mg). Like all citrus fruits, kumquat is a valuable source of ascorbic acid. A water-soluble antioxidant slows down the aging process, improves skin condition <sup>[8]</sup> promotes accelerated tissue regeneration, improves the production of its own collagen and elastin, normalizes brain function, slows down the growth of tumors, and helps fight stress. <sup>[nine]</sup>

Fruits also contain polyunsaturated fatty acids, lipids. <sup>[10]</sup> They are involved in the production of hormones, help the proper absorption of vitamins, and are a building material for nervous tissue.

# **Top 5 Health Benefits of Kumquat Juice**

# 1. Is a Powerful Antioxidant

Kumquat is a source of unique flavonoids. <sup>[11]</sup> Substances of plant origin activate the work of enzymes, increase the body's resistance to the effects of various viruses (have an antimicrobial effect), and also slow down the aging process, reduce the risk of developing oncology and cardiovascular diseases. Kumquat juice is a real drink of youth and health!

# 2. Helps in the treatment of cancer

Studies have shown that the essential oils contained in the peel and pulp of exotic citrus effectively slow down the development of oncological processes in the body. <sup>[12]</sup> Say a resounding no to cancer by drinking a daily glass of a delicious health drink called fresh kumquat to your health.

# **3. Promotes Immunity Boost**

Kumquat juice helps fight stress and various diseases by activating the natural production of unique killer cells. <sup>[13]</sup>NK cells effectively protect the body from pathogens, promptly eliminate malignant and damaged cells, preventing their uncontrolled reproduction.

## 4. Provides Prevention of Cardiovascular Diseases

The systematic use of a healthy drink has a beneficial effect on blood vessels - it cleanses them of bad cholesterol, stabilizes blood pressure, and reduces the risk of developing cardiovascular diseases. <sup>[14]</sup> To avoid stroke and heart attack, to significantly improve well-being will help the systematic use of delicious sweet and sour juice from exotic citrus fruits.

## 5. Speeds Up Metabolism, Helps Fight Obesity

The conducted experiments prove that the systematic use of kumquat juice has a positive effect on the health of people suffering from metabolic disorders, as well as their appearance. <sup>[15]</sup> Make it a habit to drink a glass of freshly squeezed kumquat fresh juice every day, and in the near future you are guaranteed to see a pleasant result in a mirror image!

#### Contraindications and possible harm to kumquat juice

Kumquat juice has practically no contraindications except for allergies to citrus fruits. Also, it should be used with caution during the period of exacerbation of gastrointestinal ulcers and people suffering from high acidity of the stomach.

Drinking a sweet and sour drink, like any other concentrated natural juice, is recommended by dentists through a straw, and it is also advised to thoroughly rinse the mouth after contact with the liquid with clean water. Such precautions will help to avoid the processes of destruction of enamel and caries of the teeth. <sup>[sixteen]</sup>

#### Norms and recommendations for the use of kumquat juice

To fully saturate the body with all the necessary vitamins and minerals, an adult is recommended to drink about 2 glasses of freshly squeezed kumquat juice daily. For teenagers over the age of 12, the norm is 1 glass, for kids from 3 years old - about 100 ml.

Adding new drinks to the diet of babies should be done carefully to avoid the risk of allergic reactions. If the baby has not previously tried either the kumquat itself or its juice, start your acquaintance with citrus fruits with a few drops of liquid. In the absence of negative reactions, you can increase the amount to 1 teaspoon, gradually bringing the rate to 100 ml.

## How to prepare and store kumquat juice

To prepare the drink, it is necessary to select whole fruits and pass them through a juicer. Note! It is not necessary to remove the skin from the fruit. In addition to the fact that these citrus fruits are eaten with the skin (it is even sweeter in taste than the sweet and sour pulp), experts say that it contains much more phenols and flavonoids. To increase the concentration and overall yield of useful substances from fruits, it is recommended to immerse them in hot water for a few seconds before processing. <sup>[17]</sup> The fruit is then juiced using a standard juicer.

It is recommended to drink the drink immediately after squeezing, until it has had time to oxidize from contact with oxygen, dangerous pathogenic bacteria have not begun to develop in it. If you cannot drink all the juice obtained at one time, you can store it in the refrigerator for a short time (for several hours).

## **Expert comment**

#### Tatyana Eliseeva, nutritionist, nutritionist

Kumquat juice is an exotic but very healthy drink. It is able in the shortest possible time to fully saturate the body with all the vitamins and minerals it needs, quickly strengthen immunity for the next season of colds and colds, and prevent the development of many dangerous diseases. That is why I recommend adding this delicious healing fresh juice to the standard diet of kids and adults as often as possible.

## Literature

- 1. Kumquats, raw, https://fdc.nal.usda.gov/fdc-app.html#/food-details/168154/nutrients
- 2. Weaver, C. M. (2013). Potassium and health. Advances in Nutrition, 4(3), 368S-377S. DOI: 10.3945/an.112.003533
- Cormick, G., Betran, AP, Romero, IB, Cormick, MS, Belizán, JM, Bardach, A., & Ciapponi, A. (2021). Effect of calcium fortified foods on health outcomes: a systematic review and metaanalysis. Nutrients, 13(2), 316. DOI: 10.3390/nu13020316
- Rondanelli, M., Faliva, M.A., Tartara, A., Gasparri, C., Perna, S., Infantino, V., ... & Peroni, G. (2021). An update on magnesium and bone health. BioMetals, 34(4), 715-736. DOI: 10.1007/s10534-021-00305-0
- Garrison, S.R., Korownyk, C.S., Kolber, M.R., Allan, G.M., Musini, V.M., Sekhon, R.K., & Dugré, N. (2020). Magnesium for skeletal muscle cramps. Cochrane Database of Systematic Reviews, (9). DOI: 10.1002/14651858.CD009402.pub2
- Clarkson, P.M., & Haymes, E.M. (1995). Exercise and mineral status of athletes: calcium, magnesium, phosphorus, and iron. Medicine and science in sports and exercise, 27(6), 831-843. PMID: 7658944
- 7. Ayotte Jr, D., & Corcoran, MP (2018). Individualized hydration plans improve performance outcomes for collegiate athletes participating in in-season training. Journal of the International Society of Sports Nutrition, 15(1), 27. DOI: 10.1186/s12970-018-0230-2
- 8. Pullar, JM, Carr, AC, & Vissers, MC (2017). The roles of vitamin C in skin health. Nutrients, 9(8), 866. DOI: 10.3390/nu9080866
- Moritz, B., Schmitz, A.E., Rodrigues, A.L.S., Dafre, A.L., & Cunha, M.P. (2020). The role of vitamin C in stress-related disorders. The Journal of Nutritional Biochemistry, 85, 108459. DOI: 10.1016/j.jnutbio.2020.108459
- Güney, M., Oz, A.T., & Kafkas, E. (2015). Comparison of lipids, fatty acids and volatile compounds of various kumquat species using HS/GC/MS/FID techniques. Journal of the Science of Food and Agriculture, 95(6), 1268-1273. DOI: 10.1002/jsfa.6817
- Lou, S.N., & Ho, C.T. (2017). Phenolic compounds and biological activities of small-size citrus: Kumquat and calamondin. Journal of Food and Drug Analysis, 25(1), 162-175. DOI: 10.1016/j.jfda.2016.10.024
- Soni, S., Parekh, MY, Jacob, JA, Mack, JP, & Lobo, DE (2022). Kumquat essential oil decreases proliferation and activates JNK signaling and apoptosis in HT-1080 fibrosarcoma cells. Molecular and Cellular Biochemistry, 477(2), 445-453. DOI: 10.1007/s11010-021-04291-2
- Terao, R., Murata, A., Sugamoto, K., Watanabe, T., Nagahama, K., Nakahara, K., ... & Eto, N. (2019). Immunostimulatory effect of kumquat (Fortunella crassifolia) and its constituents, β cryptoxanthin and R-limonene. Food & function, 10(1), 38-48. DOI: 10.1039/c8fo01971a
- Mahmoud, AM, Hernandez Bautista, RJ, Sandhu, MA, & Hussein, OE (2019). Beneficial effects of citrus flavonoids on cardiovascular and metabolic health. Oxidative medicine and cellular longevity, 2019. DOI: 10.1155/2019/5484138
- 15. Tan, S., Li, M., Ding, X., Fan, S., Guo, L., Gu, M., ... & Zhou, Z. (2014). Effects of Fortunella margarita fruit extract on metabolic disorders in high-fat diet-induced obese C57BL/6 mice. PLoS One, 9(4), e93510. DOI: 10.1371/journal.pone.0093510
- 16. Liska, D., Kelley, M., & Mah, E. (2019). 100% fruit juice and dental health: A systematic review of the literature. Frontiers in public health, 190. DOI: 10.3389/fpubh.2019.00190
- Lou, SN, Lai, YC, Hsu, YS, & Ho, CT (2016). Phenolic content, antioxidant activity and effective compounds of kumquat extracted by different solvents. Food chemistry, 197, 1-6. DOI: 10.1016/j.foodchem.2015.10.096

An extended HTML version of this article is available on the edaplus.info website

Received 19.12.2022

# Kumquat juice is a unique drink to restore strength and restore youth

Tkacheva Natalia, phytotherapist, nutritionist

Eliseeva Tatyana, editor-in-chief of the project EdaPlus.info

E-mail: tkacheva.n@edaplus.info, eliseeva.t@edaplus.info

**Abstract.** The article discusses the main properties of kumquat juice and its effect on the human body. A systematic review of modern specialized literature and relevant scientific data was carried out. The chemical composition and nutritional value of the drink are indicated, the use of kumquat juice in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of kumquat juice on the human body under certain medical conditions and diseases are analyzed separately.