



## Pomelo juice - an exotic drink of health and longevity

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**Abstract.** The largest among citrus fruits, called in Portuguese " *swollen lemons* " ( *pomposos limones* ), have an original taste and contain many vitamins and nutrients. The refreshing sweet and sour pulp of the pomelo is a part of many national dishes of China and Thailand, and its juice is recommended to be used as an effective immunostimulating agent that helps to avoid many diseases. On the shelves of supermarkets, pomelo juice can be found infrequently, but anyone can cook it on their own.

*Key words:* pomelo, pomelo juice , useful properties, contraindications, composition, calorie content

### Composition and calories

Pomelo pulp is 89.1% water. It contains virtually no fat (0.04%) and protein (0.76%), carbohydrates are only 9.6%, and calories - 38. <sup>[1]</sup> This allows us to classify freshly squeezed pomelo juice into the category of low-calorie diet drinks recommend it as a mandatory refreshing supplement when compiling a varied diet. The usefulness of the drink is explained by the rich content of various vitamins and minerals. <sup>[2]</sup>

In particular, it contains:

- Potassium (216 mg). <sup>[3]</sup> Contributes to the normalization of blood pressure <sup>[4]</sup> , is an effective immunomodulator - improves the supply of oxygen to the brain, which contributes to clarity and clarity of thinking.
- Phosphorus (17 mg). A microelement that ensures the normal functioning of the body: in tandem with calcium, it strengthens bone tissue <sup>[5]</sup> , regulates the acid-base balance, stabilizes

the gastrointestinal tract, helps to fully absorb B vitamins - fills the body with energy, improves well-being.

- Magnesium (6 mg). It helps to avoid the risk of premature birth, overwork, chronic fatigue syndrome, headaches and insomnia, prevents the occurrence of muscle cramps <sup>[6]</sup>, regulates blood pressure, and improves mood. <sup>[7]</sup>
- Calcium (4 mg). It plays an important role in regulating blood pressure and preventing cardiovascular diseases, is the basis of healthy bone tissue, and prevents the development of osteoporosis. <sup>[8]</sup>
- Sodium (1 mg). Stabilizes the balance of fluids, promotes the formation of a sufficient amount for the full functioning of the body of saliva, blood plasma, gastric juice, helps to fully absorb carbohydrates.
- Vitamin C (61 mg). Ascorbic acid is involved in the synthesis of collagen <sup>[9]</sup> (rejuvenates and makes the skin more elastic, strengthens blood vessels and ligaments), improves the functioning of the immune system <sup>[10]</sup>, helps to fully absorb iron <sup>[11]</sup>, accelerates wound healing. <sup>[12]</sup>

Pomelo is also a valuable source of various natural antioxidants useful for the body <sup>[13]</sup>. It contains thiamine, or vitamin B1, (0.034 mg) - slows down the aging process, improves brain function (prevents the development of Alzheimer's disease, Parkinson's <sup>[14]</sup>), reduces the negative effects of tobacco and alcohol on the body. Vitamin B6 (0.036 mg) contributes to the normalization of the nervous system <sup>[15]</sup>, helps to get rid of leg cramps <sup>[16]</sup> and numbness in the hands.

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

### **1. Helps Fight Obesity**

The composition of the pulp of the fruit includes a variety of flavonoids, which have powerful antioxidant properties, and also prevent the development of obesity. <sup>[17]</sup> Therefore, in the menu of people who follow the figure and weight, it is mandatory to include such a healthy and tasty drink as pomelo juice.

### **2. Improves digestion, promotes the removal of toxins**

The fruit contains a lot [of fiber](#). It absorbs toxins and promptly removes them from the body. <sup>[18]</sup> The use of freshly squeezed pomelo juice improves digestion and prevents constipation.

### **3. Reduces the risk of cancer**

The flavonoid naringin, found in citrus fruits, including pomelo, has powerful anti-inflammatory and anti-cancer activity. <sup>[19]</sup> Fresh, obtained from the fruits of exotic "bloated lemons", shows high efficiency in the fight against the growth of cancer cells.

### **4. Can be used by diabetic patients**

Pomelo juice has a low glycemic load, which allows it to be included in the menu of people suffering from type 2 diabetes. <sup>[20]</sup> Of course, it should be used in moderation. The daily norm for diabetics is no more than 200 grams of fruit pulp or 150 ml of freshly squeezed fresh juice. Also, the addition of this citrus juice in the diet of patients significantly improves the effectiveness of antidiabetic treatment. <sup>[21]</sup>

### **5. Has an anti-inflammatory effect**

Numerous studies confirm that the unique citrus flavanoids contained in the fruit (hesperidin, naringin, nobiletin) help reduce inflammation in the body. <sup>[22]</sup>

Also, pomelo juice is often used in cooking and even in cosmetology. It is included in the basis of various cosmetic masks and creams, they wipe the skin with the aim of moisturizing it, nourishing it, and normalizing the functioning of the sebaceous glands.

### **Contraindications and possible harm to pomelo juice**

**Note!** Like grapefruit, pomelo contains enzymes that interact with drugs, which can lead to changes in the properties of drugs. <sup>[23]</sup> Therefore, it is not recommended to consume the juice of these citrus fruits together with drugs, especially those intended for lowering cholesterol, treating depression, thrombosis, heart disease, etc.

Also, a delicious drink should not be included in the diet of people suffering from food allergies, especially to citrus products, to be consumed during an exacerbation of peptic ulcer.

Fresh squeezed from a pomelo, like other fruit juices, contains sugar. Therefore, after tasting a delicious drink, dentists recommend immediately rinsing the mouth with clean water from the remnants of sweet and sour liquid to avoid the risk of caries. <sup>[24]</sup>

### **Norms and recommendations for drinking pomelo juice**

To fully saturate the body of an adult with all the necessary vitamins and minerals contained in the fruit, it is recommended to drink about half a liter of freshly squeezed fresh pomelo pulp daily. For children, the norm is slightly lower: for children aged 5 to 12 years - 100 ml of drink, for teenagers - up to 1 glass.

Juice should be drunk fresh (within a few hours after squeezing). Over time, it oxidizes from contact with oxygen, losing many useful substances. There is also a risk of reproduction of unsafe microorganisms in it.

### **How to prepare and store pomelo juice**

Making juice from a pomelo is no more difficult than from other citrus fruits. Select whole fruits (the heavier the fruit, the more juicy it is), peel them by making longitudinal cuts on it, remove the slices and peel them from the film, which is quite simply removed. The seeds contained in the pulp are also easily extracted from it.

Peeled slices can be passed through a juicer or squeezed manually with gauze. The resulting juice is recommended to drink immediately or put in the refrigerator for short-term storage.

### **Expert comment**

#### **Tatyana Eliseeva, nutritionist, nutritionist**

Pomelo juice, saturated with numerous vitamins and minerals, has many beneficial properties - it improves well-being and mood, and also protects against many diseases. That is why this exotic healing drink is recommended to be included in the diet of every family, especially during the season of cold and colds.

### **Literature**

1. Pummelo, raw, <https://fdc.nal.usda.gov/fdc-app.html#/food-details/167754/nutrients>
2. Anmol, RJ, Mariam, S., Hiew, F.T., Han, W.C., Kwan, LK, Wong, AKY, ... & Ming, L.C. (2021). Phytochemical and Therapeutic Potential of Citrus grandis (L.) Osbeck: A Review. Journal of evidence-based integrative medicine, 26, 2515690X211043741. DOI: 10.1177/2515690X211043741
3. Czech, A., Zarycka, E., Yanovych, D., Zasadna, Z., Grzegorzczak, I., & Kłys, S. (2020). Mineral content of the pulp and peel of various citrus fruit cultivars. Biological Trace Element Research, 193(2), 555-563. DOI: 10.1007/s12011-019-01727-1
4. Filippini, T., Naska, A., Kasdagli, MI, Torres, D., Lopes, C., Carvalho, C., ... & Vinceti, M. (2020). Potassium intake and blood pressure: a dose-response meta-analysis of randomized controlled trials. Journal of the American Heart Association, 9(12), e015719. DOI: 10.1161/JAHA.119.015719
5. Uenishi, K. (2009). Phosphorus intake and bone health. Clinical Calcium, 19(12), 1822-1828. PMID: 19949274
6. Guerrero, MP, Volpe, SL, & Mao, JJ (2009). Therapeutic uses of magnesium. American family physician, 80(2), 157-162. PMID: 19621856
7. Gröber, U., Schmidt, J., & Kisters, K. (2015). Magnesium in prevention and therapy. Nutrients, 7(9), 8199-8226. DOI: 10.3390/nu7095388
8. 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 meta-analysis. Nutrients, 13(2), 316. DOI: 10.3390/nu13020316
9. Gref, R., Deloménie, C., Maksimenko, A., Gouadon, E., Percoco, G., Lati, E., ... & Couvreur, P. (2020). Vitamin C-squalene bioconjugate promotes epidermal thickening and collagen production in human skin. Scientific reports, 10(1), 1-12. DOI: 10.1038/s41598-020-72704-1
10. Carr, NB, & Melcher, C. P. (Eds.). (2017). Wyoming Basin rapid ecoregional assessment. US Department of the Interior, US Geological Survey. DOI: 10.3390/nu9111211
11. Lynch, S. R., & Cook, J. D. (1980). Interaction of vitamin C and iron. Ann NY Acad Sci, 355(1), 32-44. DOI: 10.1111/j.1749-6632.1980.tb 21325.x
12. Moores, J. (2013). Vitamin C: a wound healing perspective. British journal of community nursing, 18(Sup12), S6-S11. DOI: 10.12968/bjcn.2013. 18.sup12.s 6
13. Ali, M., Rumpa, NEN, Paul, S., Hossen, M., Tanvir, EM, Hossan, T., ... & Gan, SH (2019). Antioxidant potential, subacute toxicity, and beneficiary effects of methanolic extract of pomelo (Citrus grandis L. Osbeck) in long evan rats. Journal of Toxicology, 2019. DOI: 10.1155/2019/2529569
14. Tylicki, A., & Siemieniuk, M. (2011). Thiamine and its derivatives in the regulation of cell metabolism. Postepy Higieny i Medycyny Doswiadczalnej (Online), 65, 447-469. DOI: 10.5604/17322693.951633
15. Central nervous system changes in deficiency of vitamin B6 and other B-complex vitamins. 1975 Jan;33(1):21-3. DOI: 10.1111/j.1753-4887.1975.tb 07082.x
16. Sohrabvand, F., Shariat, M., & Haghollahi, F. (2006). Vitamin B supplementation for leg cramps during pregnancy. International journal of gynaecology and obstetrics, 95(1), 48-49. DOI: 10.1016/j.ijgo.2006.05.034
17. Deng, M., Dong, L., Jia, X., Huang, F., Chi, J., Muhammad, Z., ... & Zhang, R. (2022). The flavonoid profiles in the pulp of different pomelo (Citrus grandis L. Osbeck) and grapefruit (Citrus paradisi Mcfad) cultivars and their in vitro bioactivity. Food chemistry: X, 15, 100368. DOI: 10.1016/j.fochx.2022.100368
18. Liu, H., Zeng, X., Huang, J., Yuan, X., Wang, Q., & Ma, L. (2021). Dietary fiber extracted from pomelo fruitlets promotes intestinal functions, both in vitro and in vivo. Carbohydrate Polymers, 252, 117186. DOI: 10.1016/j.carbpol.2020.117186
19. Xu, C., Huang, X., Huang, Y., Liu, X., Wu, M., Wang, J., & Duan, X. (2021). Naringin induces apoptosis of gastric carcinoma cells via blocking the PI3K/AKT pathway and activating

- pro -death autophagy. *Molecular Medicine Reports*, 24(5), 1-10. DOI: 10.3892/mmr.2021.12412
20. Shi-ying Shao, Wei-jie Xu, Jing Tao... (2017). Glycemic index, glycemic load, and glycemic response to pomelo in patients with type 2 diabetes. *Current Medical Science* volume 37, pages 711–718. DOI: 10.1007/s11596-017-1793-x
21. Somanathan Karthiga, R., Sukhdeo, S.V., Madhugiri Lakshminarayan, S., & Mysuru Nanjarajurs, S. (2021). Efficacy of Citrus maxima fruit segment supplemented paranthas in STZ induced diabetic rats. *Journal of Food Science*, 86(5), 2091-2102. DOI: 10.1111/1750-3841.15707
22. Zhang, M., Zhu, S., Yang, W., Huang, Q., & Ho, CT (2021). The biological fate and bioefficacy of citrus flavonoids: Bioavailability, biotransformation, and delivery systems. *Food & Function*, 12(8), 3307-3323. DOI: 10.1039/d0fo03403g
23. Molden, E., & Spigset, O. (2007). Fruit and berries--interactions with drugs. *Tidsskrift for den Norske laegeforening: tidsskrift for praktisk medicin, ny raekke*, 127(24), 3218-3220. PMID: 18084364
24. Heyman, M.B., & Abrams, S.A. (2017). Section on Gastroenterology, Hepatology, and Nutrition, Committee on Nutrition. Fruit juice in infants, children, and adolescents: current recommendations. *Pediatrics*, 139(6), e20170967. DOI: 10.1542/peds.2017-0967

[An extended HTML version of this article](#) is available on the edaplust.info website

*Received 10.12.2022*

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**Abstract.** The article discusses the main properties of pomelo 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 pomelo juice in various types of medicine and the effectiveness of its use in various diseases are considered. The potentially adverse effects of pomelo juice on the human body under certain medical conditions and diseases are analyzed separately.