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A Review on Remedial Properties of Kivi fruit

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Abstract: - Kiwifruit are a nutrient-dense fruit and extensive research over the last decade on the health benefits of kiwifruit has linked their regular consumption to improvements not only in nutritional status, but also benefits to digestive, immune and metabolic health. The health benefits of consuming fruit are well documented. Kiwifruit contains numerous phytonutrients as well as well-known vitamins and minerals that promote health. It also contains lots of glucose and fructose and a small amount of sucrose. It contains very good levels of vitamin-A, vitamin-E, vitamin-K and flavonoid anti-oxidants such as beta-



carotene, lutein and xanthin. Kiwifruit is known to work well against digestive issues, cardiovascular diseases, skin health, diabetes, inflammation and microbial action etc. which makes it well suited for therapeutic interventions as well as food applications

Key words:- Kiwifruit, nutritional, health benefits, food applications, digestive, skin health.

Introduction: -

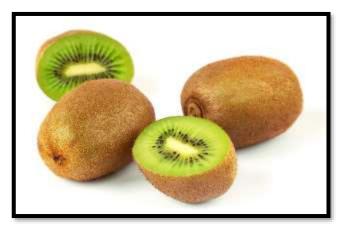
Fruits are the mature, ripened ovary (reproductive part of plant) which is therefore consumed as a whole. Kiwifruit are exceptionally high in vitamin C and contain an array of other nutrients, notably nutritionally relevant levels of dietary fibre, potassium, vitamin E and folate, as well as various bioactive components, including a wide range of antioxidants, phytonutrients and enzymes, that act to provide functional and metabolic benefits. The contribution of kiwifruit to digestive health is attracting particular attention owing to a growing body of evidence from human intervention studies. There are several plausible mechanisms of action that are likely to act together including the fiber content and type, the presence of actinidin (a natural proteolytic enzyme unique to kiwifruit which breaks down protein and facilitates gastric and ileal digestion.(1,2) and other phytochemicals which may stimulate motility (3).

Kiwifruit (often shortened to kiwi outside New Zealand) or Chinese gooseberry is the edible berry of several species of woody vines in the genus Actinidia.[4][5]

The most common cultivar group of kiwifruit (Actinidia deliciosa 'Hayward') [6] is oval, about the size of a large hen's egg: 5-8 centimetres (2–3 inches) in length and 4.5-5.5 cm (1+3/4-2+1/4 in) in diameter. It has a thin,

fuzzy, fibrous, tart but edible light brown skin and light green or golden flesh with rows of tiny, black, edible seeds. The fruit has a soft texture with a sweet and unique flavour.

The fruit became popular with British and American servicemen stationed in New Zealand during World War II, and later became commonly exported, first to Great Britain and then to California in the 1960s.



Nutritional value of kiwi fruit:-

Green kiwifruit has 255 kilojoules (61 kcal) of food energy per 100 grams (3.5 oz), of which are 83% water and 15% carbs, with very little protein and fat (table). It has a modest amount of vitamin E (10% DV), is very high in vitamin C (112% DV) and vitamin K (38% DV), and has no other micronutrients in significant amounts.(7)

Nutritional value per 100 g (3.5 oz)								
Energy	255 kJ	<u>Carbohydrates</u>	14.66 g	<u>Vitamin K</u>	38%			
	(61 kcal)				40.3 µg			
Protein	1.14 g	<u>Sugars</u>	8.99 g	Minerals	Quantity %DV [†]			
Vitamins	Quantity	Dietary fiber	3 g	<u>Calcium</u>	3%			
	%DV [†]				34 mg			
<u>Vitamin A equiv.</u>	122 μg	<u>Fat</u>	0.52 g	Copper	7%			
<u>lutein zeaxanthin</u>					0.13 mg			
Thiamine (B1)	2%	Riboflavin (B2)	2%	Iron	2%			
	0.027 mg		0.025 mg		0.31 mg			
Pantothenic acid	4%	Niacin (B3)	2%	Magnesium	5%			
<u>(B5)</u>	0.183 mg		0.341 mg		17 mg			
Vitamin B6	5%	<u>Choline</u>	2%	Manganese	5%			
	0.063 mg		7.8 mg		0.098 mg			
Folate (B9)	6%	<u>Vitamin C</u>	112%	Phosphorus	5%			
	25 µg		92.7 mg		34 mg			

Vitamin B12	0% 0 µg	<u>Vitamin E</u>	10% 1.46 mg	Zinc	1% 0.14 mg
Potassium	10% 312 mg	<u>Sodium</u>	0% 3 mg	Water	83 g
<u>Selenium</u>	0% 0.2 μg				

Digestive health :-

Kiwifruit contains actinidin, a proteolytic enzyme that aids in protein digestion, similar to papain in papaya and bromelain in pineapple. It helps the digestive system run smoothly.(8)

Skin health :- It contains vitamin C, an antioxidant that prevents sun, pollution, and smoking damage, smoothes wrinkles, keeps skin youthful, and improves texture. It contains vitamin E, which softens and moisturizes the skin and prevents deterioration. Vitamins promote cell regeneration, leading to younger and more flexible skin. Vitamin C is responsible for collagen production. Collagen, a connective protein, heals skin and keeps it tight and supple. It promotes healing from cuts and wounds and prevents rough, dry skin. It is also rich.(9-16)

Bone :-

Kiwifruit contains high levels of folate, magnesium, and Vitamin E, providing numerous health advantages, including bone building. Vitamin K may also help to build bone mass by stimulating osteotrophic activity in the bone.

Heart : Kiwi fruit is reported to have anti-platelets factor which prevents the over functioning of platelets (major reason of CVD's). Also kiwi fruit is rich in fiber content which helps to reduce Cholesterol level of blood and prevents heart disease (17). Also contains protective polyphenols, vitamin C, vitamin E and potassium aids reduction of triglycerides in the blood (due to low sodium and high potassium).

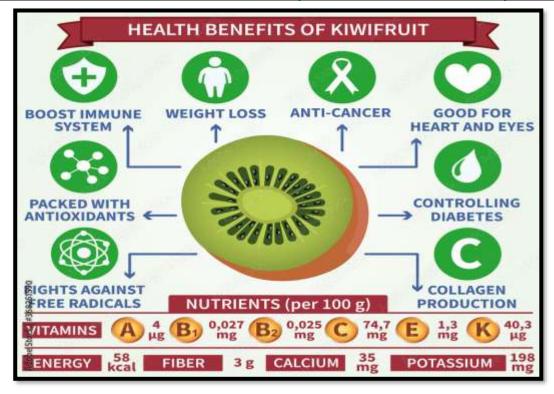
Blood clotting and absorption of vitamin D :- Fruit rich in vitamin K promotes blood coagulation and vitamin D absorption (Tyagi et al., 2015). The high content of amino acids (arginine and glutamate) enhances blood flow, causes vasodilation, and reduces blood clots.

Better sleep: Kiwifruit contains serotonin, which promotes better sleep. Consuming kiwi may improve sleep onset and reduce wakefulness. Kiwi eating can help improve sleep quality.

Depression: Kiwifruit contains inositol, a precursor of an intracellular second messenger pathway that can help alleviate depression.

Anemia: Consuming this fruit improves iron absorption and prevents anemia.

Reduce Kidney stone: Consuming high amounts of potassium can reduce the production of kidney stones. Fruits high in magnesium can reduce the risk of kidney stones.



Blood pressure: Kiwis' high potassium content can counteract the effects of salt in the body. Low potassium consumption may increase the risk of developing high blood pressure as much as high salt intake does. Copper helps produce red blood cells and strengthen the immune system.

Cancer: Kiwifruit contains cytotoxic properties that target cancer cells without harming healthy cells. Kiwi fruit contains high levels of dietary fiber, which reduces the risk of colon cancer. Kiwifruit contains an antimutagenic component that prevents gene alterations that might cause cancer. Catechin, a phytochemical, reduces the toxicity of anti-cancer medicines by promoting bone marrow growth. Kiwifruit contains lutein, a phytochemical that may help prevent prostate and lung cancer. The presence of glutathione may explain the decline. Kiwi fruit contains antioxidants, carotenoids, vitamins, and fibers that can help prevent and treat cancer.

Diabetes: Kiwi has a low glycemic index, making it ideal for those with diabetes. Fiber-rich meals, such as kiwifruit, can help diabetes people maintain stable blood sugar levels. "In summary, the health benefits of these fruits make them superior." Consuming fruits may help prevent and treat several ailments. This fruit is highly nutrient-dense and should be consumed more regularly for optimal health. (9-16)

Conclusion: -

Kiwis are high in vitamin C, copper, and vitamin K, with lower amounts of many other essential nutrients. Their excellent nutritional content benefits numerous aspects of health, including digestion, weight management, and blood sugar regulation. They also improve heart and eye health, as well as immune system function. kiwi fruit is very delicious, attractive fruit in current era it is mostly used as nutraceutical and also in various cosmetics, pharmaceutical preparations.

Reference: -

1. Xiong, P.; Liu, M.; Liu, B.; Hall, B.J. Trends in the incidence and DALYs of anxiety disorders at the global, regional, and national levels: Estimates from the Global Burden of Disease Study 2019. J. Affect. Disord. 2022, 297, 83–93. [CrossRef] [PubMed]

2. GBD 2019 Mental Disorders Collaborators. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: A systematic analysis for the Global Burden of Disease Study 2019. Lancet Psychiatry 2022, 9, 137–150. [CrossRef]

3. World Health Organization. Depression and Other Common Mental Disorders: Global Health Estimates; World Health Organization: Geneva, Switzerland, 2017.

4. Morton J (2011). <u>"Kiwifruit: *Actinidia deliciosa* In: Fruits of Warm Climates, 1987"</u>. Center for New Crops & Plant Products at Purdue University. Retrieved 8 April 2014.

5. Stirk, Bernadine (2005). <u>"Growing Kiwifruit"</u> (PDF). <u>Pacific Northwest Extension Publishing</u>. Retrieved 4 January 2013.

6. Beutel, James A. (1990). <u>"Kiwifruit"</u>. In Janick, J.; Simon, J.E. (eds.). *Advances in new crops*. <u>Timber Press</u>. pp. 309–316. Retrieved 11 September 2018 – via Center for New Crops & Plant Products at Purdue University.

7. Piombo, Georges; Barouh, Nathalie; Barea, Bruno; Renaud, Boulanger; Brat, Pierre; Pina, Michel; Villeneuve, Pierre (2006). <u>"Characterization of the seed oils from kiwi (Actinidia chinensis), passion fruit (Passiflora edulis)</u> and guava (Psidium guajava)" (PDF). *OCL – Oilseeds and Fats, Crops and Lipids*. **13** (2): 195–199. <u>doi:10.1051/ocl.2006.0026</u>.

8. Dwivedi, S., Adarsh Kumar Mishra, Sonali Priya, Fatma Sibtain and Ashutosh Dhami, "Potential Health Benefits of Kiwifruits: The King of Fruits", Journal of Science and Technology, Vol. 06, Issue 01, JanFebruary 2021, pp126-131.

9. Chaurasia, Madhuri and Gaba, Ritu (2014). Kiwi Fruit: A Fruit or a Medicine. Res. News For U., 17: 203-204.

10. Keith Singletary (2012). Kiwifruit: Overview of Potential Health Benefits. Nutrition Today, 47 : 133-147.

11.Maillar, C. (1998). The kiwi, rich in vitamins C and E and also in potassium. Servir May-1998 Jun 30; 46(3):160. 1998. PMID:13380.

12.Montefiori, M., Mc Ghie, T.K., Costa, G. and Ferguson, A.R. (2005). Pigments in the fruit of redfleshed kiwifruit (Actinidia chinensis and Actinidia deliciosa). J. Agric. Food Chem., 53 : 9526-9530.

13.Morton, J., Julia F. Morton and Miami, FL. (1987). Fruits of warm climates. Kiwifruit. p. 293–300.

14. Motohashi, N. (2002). Cancer prevention and therapy with kiwifruit in chinese folklore medicine: a study of kiwifruit extracts. J. Ethnopharmacol., 81 (3) : 357-364.

15.Sommerburg, O., Keunen, J.E., Bird, A.C. and van Kuijk, F.J. (1998). Fruits and vegetables that are sources for lutein and zeaxanthin: the macular pigment in human eyes. Br. J. Ophthalmol., 82(8) : 907-910.

16.Szeto, Y.T., Tomlinson, B. and Benzie, I.F. (2002). Total antioxidant and ascorbic acid content of fresh fruits and vegetables: implications for dietary planning and food preservation. Br. J. Nutr., 87.

17. Richardson, D.P.; Ansell, J.; Drummond, L.N. The nutritional and health attributes of kiwifruit: A review. Eur. J. Nutr. 2018, 57, 2659–2676. [CrossRef] [PubMed].