



The Nutritional Symphony of Ragi: A Melody for Well-being

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INTRODUCTION

Ragi, also known as finger millet, has a rich history in India, mentioned by ancient Sanskrit writers as 'Rajika.' It is believed to have originated in southern India and was domesticated by early inhabitants before the arrival of Aryans. De Candolle suggests that *Eleusine coracana*, the scientific name for ragi, originated in India around 3,000 years ago and later spread to Arabia and Africa. There is a famous Kannada proverb that states "consuming ragi will avert illness".

Karnataka and Tamil Nadu are the principal ragi-growing states in India, where it serves as a staple food, valued for its hardiness and nutritional benefits. Ragi is part of the *Eleusine coracana* species, with a wild counterpart called *Eleusine indica*. This crop, known as "kezhvaragu" in Tamil, is a vital dryland crop cultivated in tropical and subtropical regions. Ragi is scientifically recognized for its health benefits, including improved digestion, heart disease prevention, anti-aging properties, and diabetes management. In appearance, it gets its name "finger millet" due to the grain head's resemblance to five fingers. With local names like "Ragi" in Kannada, Hindi, and Telugu and "Nachni" in Marathi, ragi is drought-resistant and adaptable to various soils and terrains in India. Over the past few decades, research and UN FAO (United Nations Food and Agriculture Organization) initiatives have led to a resurgence of ragi's popularity, promoting its inclusion in daily diets to combat malnutrition and enhance overall health. Despite being overshadowed by rice and wheat, ragi is reclaiming its status as a nutritious and valued crop in contemporary Indian nutrition practices.

Ragi's Nutrient Rich Profile:

Ragi boasts an impressive nutritional profile, encompassing essential macronutrients such as carbohydrates, fibers, fats, and proteins. Additionally, it contains significant levels of key micronutrients, including vitamins and minerals, while maintaining minimal levels of cholesterol and sodium to support heart health. Rich in vitamins C and E, ragi contributes to immune system strength, as well as promoting skin and hair health. Abundant in B complex vitamins (thiamine, riboflavin, niacin, and folic acid), calcium, magnesium, iron, and phosphorus, ragi flour stands out as a wholesome breakfast cereal and a recognized superfood.



Ragi, with a caloric content of 385, is a beneficial fiber-rich staple in Indian cuisine, offering an alternative to common grains like rice, wheat, or barley. It stands out as a unique plant source, rare among crops, providing essential amino acids like isoleucine, tryptophan, valine, methionine, and threonine. This distinction makes it a valuable addition to both vegetarian and vegan diets. Additionally, Ragi's macronutrient composition includes 7% total fat, with 3% saturated fat, 5% polyunsaturated fat, and 2% monounsaturated fat. It is cholesterol and sodium-free, making it a heart-healthy option. The grain contributes 25% to total carbohydrates, with a substantial 14% dietary fiber and only 2% sugars. In terms of protein, Ragi provides 10% of the daily value. Its micronutrient content comprises 26% calcium, 11% iron, and 27% potassium. Among vitamins, it offers 5% thiamine, 7.6% riboflavin, 3.7% niacin, 3% folic acid, 7% vitamin C, and 4.6% vitamin E. (Akash Goldy 2022).

Holistic Break Fast food: A wide range of important elements, including antioxidants, iron, calcium, B-complex vitamins, vitamin C, vitamin E, proteins, fiber, enough calories, and healthy unsaturated fats, are found in ragi. The morning after a restful night's sleep, the metabolism of the digestive tract and intestines is at its highest. Therefore, eating ragi-based foods for breakfast, such as ragi upma or ragi parathas, stimulates the digestive juices and ensures that all of the nutrients in ragi are fully assimilated. These nutrients are then absorbed into the bloodstream and sent to the body's essential organs, which include the heart, brain, lungs, liver, and kidneys.

Provides Vital Amino Acids:

As it contains specific necessary amino acids, ragi is a special plant-based source of high-quality proteins. It provides threonine, which facilitates the healthy development of teeth and enamel and guards against gum disease, valine and isoleucine, which mend damaged muscular tissues, and methionine, a sulfur-based amino acid that restores skin and hair health.

Encourages a Diet Free of Gluten

Unfortunately, a large proportion of adolescents and the elderly are prone to developing intolerances to the gluten proteins found in cereal grains like wheat, which are often utilized as ingredients in Indian cuisine. Ragi is naturally gluten-free and is frequently suggested for individuals with celiac disease. It may be used to make chapatis, dosas, and desserts like mithais. It's crucial to remember that ragi has



a complex digestive system and is best consumed in the morning due to its high fibre content. Eating ragi at night is generally not recommended, especially for **people who have gluten sensitivities or digestive issues**.

Boosts Gemstone Density

As a great natural calcium source, finger millet helps build stronger bones in growing children. Additionally, it helps people over 50 regain their ideal bone density, which lessens the symptoms of osteoporosis. While younger individuals can eat ragi on a regular basis, middle-aged and senior citizens should limit their intake to prevent kidney and gastrointestinal problems and to support bone health.

Regulates Blood Sugar Levels

Finger millet contains a lot of phytates, tannins, and polyphenols—plant compounds that slow down the digestive process—despite being abundant in calories and carbohydrates for immediate energy. This helps people with Type 2 diabetes reduce their elevated blood sugar levels, which makes ragi an important part of a diabetic diet. Additionally, people choose ragi as the best diet to accelerate weight reduction and manage other lifestyle conditions like diabetes and obesity because of its high fiber content and confined digestion.

Addresses Anemia

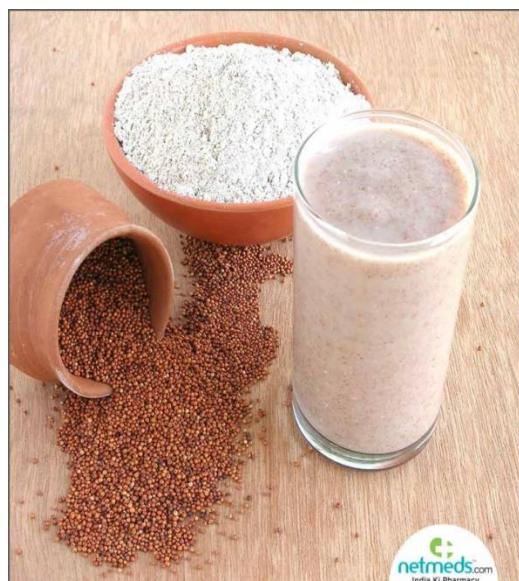
Lack of iron on an annual basis, an enormous percentage of Indian men, women, and children suffer from anemia, which causes extreme tiredness and low productivity. Ragi is an iron-rich food that is advantageous for individuals with low blood hemoglobin levels, effectively treating anemia.

Enhances the function of the nervous system.

Although ragi contains high levels of tryptophan, which is an amino acid, eating it in balanced each day helps to improve nerve impulse transmission, activate memory centers in the brain, and calm the mind. By preserving positive emotions and encouraging restful sleep, ragi aids in the treatment of anxiety and insomnia by balancing the levels of the neurotransmitter serotonin.

Improves Heart Health

People with heart conditions can safely eat meals cooked with ragi flour because it is totally free of cholesterol and sodium. In addition, a diet rich in dietary fiber and vitamin B3, often known as niacin, helps to raise good HDL and lower bad LDL levels. This improves cardiac muscle performance and heart health by preventing plaque and fatty deposits in the heart arteries.



Ragi For Motherhood and Children

Pregnant and nursing women can reap enormous health benefits by sprouting some ragi grains overnight and eating them the following morning. Ragi's high iron and calcium content makes it the perfect food for balancing hormones, promoting milk production, and pregnant and newly moms.

Ragi Relating IBS

Irritable bowel syndrome, also known as often IBS for short, is a common digestive illness that is characterized by excruciating pain, irregular bowel movements, gas, diarrhea, and constipation. Ragi has a higher content of nutritional fibre than several other cereal types, including wheat, barley, and oats, which is a blessing. Consuming more fiber-rich foods improves bowel movement by controlling fecal volume and

facilitating the best possible passage of food and other materials through the intestines. This is how having ragi porridge for breakfast promotes a healthy metabolism, helps with the symptoms of IBS, and may even help prevent colon cancer.

Applications of Ragi for Skin and Hair:

Not solely is ragi flour a miracle cure for almost every sickness that affects the body's internal organs, but it also improves appearance on the outside by reviving skin and fortifying hair. Its extraordinarily high amino acid content and strong antioxidants are primarily responsible for this. In addition, ragi flour's slightly coarse texture makes it an excellent exfoliant that thoroughly eliminates dead skin cells from the face, body, and scalp in addition to giving skin and hair a revitalizing appearance and bright radiance.

Promises Protection Towards Ageing

Phenolic acids and flavonoids, two kinds of antioxidants with exceptional anti-aging capabilities and ability to terminate free radicals, make up the seed coat of ragi grains. This encourages the production of new skin cells, which masks wrinkles and fine lines. Furthermore, the abundant amounts of amino acids in ragi support the production of collagen, which keeps the skin smooth and supple.

Halts losing your hair

Ragi is rich in formative amino acids like methionine and lysine, which when combined with ragi in the diet can enhance hair development and revitalise hair texture. This prevents early greying and balding and regulates hair loss.

Ragi Side Effects:

Most healthy individuals, including those who are overweight or suffer from certain lifestyle conditions like diabetes, can generally tolerate eating ragi on a daily basis. However, due to ragi's high calcium content, those with **kidney problems** should either limit or altogether avoid ragi usage. This can therefore raise oxalic acid levels and result in an increase in kidney stones or urinary calculi in the body.

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