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# Kshudradhanya in Daily Lifestyle w.s.r. to Millets: A Critical Review

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## ABSTRACT

Nutrition is a crucial factor in both health and development. Better nutrition is linked to stronger immune systems, safer pregnancies and births, a lower risk of non-communicable diseases (including diabetes and cardiovascular disease), and longer lifespans. However, the modern style of life and eating habits contribute to poor nutrition and health issues including diabetes and obesity. Millets, which don't make you gain weight and are also incredibly nutritious, can be employed in these circumstances. A variety of small-seeded grass species called millets are widely grown as cereal grains for human and animal nutrition around the world. The bulk of the plants that are frequently referred to as millets are members of the grass family *Poaceae* or *Gramineae*. Due to its abundance in protein, fibre, magnesium, phosphorus, copper, potassium, and manganese, millet is a nutrient powerhouse. The value of millets in daily life is discussed in this article. A few millet preparations are also explained in order to include them into daily life.

**Key words:** Nutrition, Millets, Grass, Cereals, Protein, Fibers

## INTRODUCTION

Because of the nutritional variety and health benefits of millets, humankind has started to go in that direction as a result of the various new ailments that have recently been discovered. These adjusted dietary practises have made millets a part of our daily lives. Including millet in the diet is one of the dietary changes. Sorghum (*Jowar*), *Sama* (Little Millet), *Ragi* (Finger Millet), *Bajra* (Foxtail Millet), *Variga* (*Proso* Millet), *Gavedhuka* (Adlay Millet), *Koradusha* or *Kodrava*

(*Kodo* Millet), *Shyamak* (Barnyard Millet), etc. are some examples of millets. *Bajra* and *Sama* both have a lot of fat, but *Ragi* has the least amount. Millet is widely eaten as food in rural areas. In addition to India, China, Greece, Egypt, and Africa are the main growing regions for millets. While the majority of millets are utilised as animal feed in rural regions, some varieties, such as finger millets and sorghum, are consumed. Millets are incredibly nutritious. Millets play a significant role in numerous traditional diets. Various millets are used in many Indian states. Millets have been grown for a very long time.<sup>[2]</sup> Millets are mentioned in the form of *Trinadhanya* and *Kshudradhanya* in *Ayurvedic Samhitas* as well. *Dhanyavarga* in *Charaksamhita* mentions characters like *Shyamak* and *Koradusha*. In *Rasa*, these are *Kashay* and *Madhura*, and *Sheeta* is their *Veerya*. They are easy to digest, raise *Vata*, balance *Kapha*, *Pitta*, *Ruksha*, and *Grahi* and they also balance *Ruksha*.<sup>[3]</sup> Millets are mentioned in numerous further *Samhitas*. Additionally, *Dhanyavarga* in *Bhavprakash* mentions millets such *Kodo*, *Gavedhuka* and *Yavanala* as well as *Kshudradhanya* (*Kanguni*, *Cheanak*, and *Shyamak*). *Shudradhanya* is *Ushna*, has

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*Kashaya* and *Madhura Ras*, *Laghu*, *Lekhan*, *Vipaka* is *Katu*, *Ruksha*, *Vatakaraka* and *Grahi* and it also lessens *Pitta* and *Kapha* according to *Bhavprakash*.<sup>[4]</sup>

### Benefits of Millets

Millets are significantly superior to wheat and rice in terms of nutrients. When compared to wheat and rice, millets have a higher fibre content and a lower mineral content. All other millets also have at least twice as much calcium as rice, with finger millet having a calcium content of 30 times that of rice.<sup>[5]</sup> Beta carotene, vitamins, and other minerals are abundant in millets. The linoleic, oleic, and palmitic acids, as well as monogalactosyl, diacylglycerols, digalactosyl diacylglycerols, phosphatidylethanolamine, and other important fatty acids, are all abundant in millets. For the body to produce cellular energy, phosphorus and vitamin B components including niacin, folacin, riboflavin, and thiamine are present in millets.<sup>[7]</sup> In addition to their nutritional importance, millets have been produced for ages for a variety of additional reasons. Millets are grown without pesticides on land that is pest-free according to standard farming practises. Millets like foxtail millet function as anti-pest agents in storage conditions for pulses like green gramme because they are pest-free. Millets don't require fumigants.<sup>[6]</sup> Millets are comparatively less important than other crops in Indian agriculture when it comes to feeding crops, but they are essential for ensuring food security at the local and farm level. Millets may thrive in regions that are prone to drought and can withstand higher heat regimes. Millets may thrive even in environments with very little rainfall and without irrigation. Millets may flourish in areas with little water. Millets' growing season is brief. Millets mature in between 60 and 100 days. Alkali-forming cereals include millets. They support keeping the body's pH in equilibrium. Gluten is not present in millets. Gluten sensitivity is one of the most prevalent gastrointestinal issues nowadays. Millets can therefore be provided in these circumstances.<sup>[1]</sup>

### Varieties of Millets<sup>[8]</sup>

#### Major Millets

1. **Pearl Millets** - The most popular variety of millet is pearl millet, also known as *Bajra*. For ages, *Bajra*

has been a mainstay of Indian cooking, either in the form of khichdi or as a raw ingredient for *Rotis*. Rajasthan is India's top producer of this nutrient-rich crop due to the fact that it requires a high temperature to grow. This uncommon crop is grown during the hotter summer months because it can withstand harsh circumstances like dryness, low salinity, low soil fertility, and high pH. Magnesium, a mineral found in pearl millet, helps asthmatics breathe easier and decreases the impact of migraines. Gallstone incidence is reduced in part due to the fibre in pearl millets.<sup>[9],[10]</sup>

2. **Finger Millet - Ragi**, also known as finger millet, is most often farmed in Ethiopia, Ethiopia, and Sri Lanka. This superfood's ingredients enhance digestion, slow the ageing process, and reduce the risk of heart disease. The popularity of *Ragi*, a staple of Indian cuisine for many years, declined as the prevalence of wheat and rice increased. But when UN FAO emphasised the need of millet consumption for reducing malnutrition and other illnesses, it began to make a comeback. Natural calcium found in finger millet helps to build bones and reduces the risk of bone fractures. Iron that occurs naturally in it also aids in the treatment of anaemia. Finger millet is advantageous for small children, the elderly, and expectant mothers since it is high in calcium. It facilitates lactation in moms.

#### A. Minor Millets

1. **Foxtail Millet** - sometimes referred to as *Kangu*, is a type of millet that was first cultivated in northern China and India. Given that it resembles a tapering cluster of flowers, it gets its name. This dry crop is sown around the last week of May and can take up to 70 days to mature. Foxtail millet assists in the continual release of glucose without affecting the body's metabolic process. Foxtail millet is regarded as a heart-healthy food and aids in reducing the incidence of diabetes in society because of its high magnesium content.<sup>[10],[11]</sup>

2. **Proso Millet** - Also referred to as *Cheenak*. Pellagra is brought on by a lack of niacin, a type of vitamin

B3 that *Proso* millet is effective in addressing. Niacin is abundant in proso millet. Traditionally, it has been served as a healing dish, especially following childbirth or illness.<sup>[10],[12]</sup>

**3. Little Millet** - Also known as *Sama*, *Shavan*, or *Kutki*, little millet has been enriched with minerals like zinc, iron, potassium, and calcium. This grain has a lot of vitamin B3, which reduces cholesterol, encourages a rapid metabolism, repairs tissue, and generates energy. Minerals including calcium, iron, potassium, and zinc are also abundant in it. Additionally, it provides the body with the essential lipids for weight loss. Its high fibre content is an additional advantage.<sup>[10],[11]</sup>

**4. Kodo Millet** - often referred to as *Kodrava* or *Koradusha*, is a traditional food that promotes weight loss and has a taste like to rice. It is easily absorbed and abundant in phytochemicals and antioxidants, which help to fend against numerous ailments brought on by a sedentary lifestyle. *Kodo* millet also helps women's menstrual cycles become more regular and eases hip and knee discomfort.<sup>[10],[13]</sup>

**5. Shyamaka** - Also known as barnyard millet, is a tiny white seed that is thought to be the most nutrient-dense cereal grain. Because it is high in fibre, carbs, and protein, it is used to lose weight. Additionally, it contains plenty of calcium and phosphorus, two nutrients crucial for the development of bones.<sup>[10]</sup> According to *Ayurveda*, millets are:<sup>[1],[4]</sup> In addition, every millet has additional qualities mentioned below.

**A. Foxtail Millet** - Commonly known as *Kangu/Priyangu* (*Setaria italica* Beauv). Other forms of *Guna* and *Prayoga* include *Guru* (heavy for digestion), *Sangrahi* (absorbs excess fluids and aids in digestion), *Brumhana* (nourishes body tissues), *Shoshana* (dries up surplus moisture), *Bhagnasandhanakrit* (heals fractures), *Durjara* (difficult for digestion), and *Vrishya* (aphrodisiac). It acts as a substitute for rice. *Kangu* is used in situations similar to *Amvata* and eases childbirth pain as well.

**B. Cheenak/Cheena** - (Indian millet, also known as proso millet; *Panicum miliaceum*) Other *Guna* and *Prayog* include *Brumhana* (nourishes bodily tissues), *Guru* (heavy for digestion), *Durjara* (difficult for digestion), and *Bhagnasandhanakara* (facilitates fracture repair).

**C. Shyamak/Sawa** - (Barnyard millet, *Echinochloa frumentacea*) *Pittaj Vikara* and *Vibandha* use *Shyamak Panchang* among other *Guna* and *Prayog*. It is also referred to as "poor people's cereal." It is also *Dhatu Shoshak* (dries the body tissues) and *Sangrahi* (absorbs excess fluids and aids in regular faeces formation).

**D. Kodrava/Koradusha** - (Kodo millet, *Paspalum scrobiculatum*) Other *Guna* and *Prayog* include *Vishahara* (anti-poisonous), *Avrishya* (anaphrodisiac), *Guru* (heavy for digestion), *Pathya* in *Vrana* (excellent food in wounds and ulcers), *Madhura-Tikta Rasa*, and *Guru* (absorbs excess fluids and aids in regular faeces formation). Diabetic patients can also be fed it in place of rice.

**E. Gavedhuka** - (Adlay millets: *Coix lacryma*) *Katu* - *Madhura Rasa*, *Karshyakaari* (emaciating), and *Kapha Hara* (Decreases *Kapha Dosha*) are additional *Gunas* and *Prayogs*. It is said that other qualities resemble *Shyamaka*. *Gavedhuka* is employed in *Mutra Krich* because it possesses characteristics similar to those of the diuretic/*Mutral*. This plant's roots are employed in the treatment of dysmenorrhea, or *Pidita Artava*. This grain is used to make chapati, which aids in weight loss.

**F. Yavanala** - (Jowar or *Sorghum vulgare*) *Ruchya* (improves taste perception), *Trishnaghna* (reduces excessive thirst), and *Kledaghna* (reduces excessive moisture content) are additional *Guna* and *Prayog*. Additionally, it possesses aphrodisiac qualities somewhat similar to *Vrishya* and *Mutrajanan* (Urogenesis).

**G. Nartaki** - (*Ragi*/Finger millet, *Eleusine coracana*) *Tikta-Kashay-Madhura Rasa*, *Sheeta* (cool in potency), *Snigdha*, *Balya* (promotes strength), and

*Vrishya* (aphrodisiac) are additional *Guna* and *Prayog*.

## DISCUSSION

The least allergenic and most easily digestible foods are millets, which are regarded as one of the finest foods for those with gluten sensitivity. Millets are essential crops in semiarid and tropical regions of the world due to their short growing seasons, resistance to pests and diseases, and productivity in hot and dry climates when primary cereals cannot be relied upon to generate yields that can be sustained. They are typically eaten by the less fortunate members of the community as foods that promote health and energy. In terms of their protein, carbohydrate, and energy content, millets have nutritional potential that is comparable to that of popular cereals like rice, wheat, and barley. The inclusion of phytochemicals including dietary fibre, polyphenols, tocopherols, and phytosterols as well as an abundance of specific minerals, vitamins, trace elements, vital fatty acids, and amino acids is usually what causes the majority of the millet's health benefits. Millets typically possess qualities that allow them to be awarded *Kaphaj*, *Pittaj*, and *Raktaj Vyadhi*, according to Ayurvedic scriptures. Millets shouldn't be given to *Vataj Vyadhi* patients since they enhance *Vata Dosh*. Although each millet's specific indicators are not given, they can be deduced by looking at its *Guna* (properties) and *Karma* (Actions).<sup>[1]</sup>

**1) *Kangu* (Foxtail Millet)** - Since *Kangu* millet is *Sangrahi*, as was previously mentioned, it can be indicated in both *Grahani* (sprue) and *Atisara* (diarrhoea). *Kangu* can be used for *Dhatu Shoshana* (reduction of bodily tissues) of over nourished *Dhatu*s like *Meda* (adipose tissue) and *Mamsa* (muscular tissue) while also nourishing the body by providing micro-nutrients because it is both *Brumhana* (nutrition) and *Shoshana*. This idea works effectively when dealing with issues like *Sthoulya* (fat) and *Prameha* (diabetes). *Kangu* is a *Bhagnasandhankarak*, therefore it is indicated in *Bhagna* (fractures) and in circumstances like *Kapha-Pitta Pradhan Twaka Vikara* and *Amavata* based on its *Guna* and *Karma*.<sup>[1],[16]</sup> Foxtail millets'

aqueous extracts have outstanding anti-hyperglycemic action.<sup>[17]</sup>

- 2) *Cheenak* (Proso Millet)** - As previously mentioned, *Cheenaka* is advised for *Santarpana Janya Vyadhi*, or diseases brought on by excessive nourishment of body tissues, such as *Sthoulya* (obesity), *Prameha* (diabetes mellitus), and *Medoroga* (diseases brought on by excessive lipids), because it has properties like *Guru*, *Ruksha* (reduces unctuousness), *Kapha Hara*, and *Brumhana*.<sup>[1],[18]</sup> Diabetes mellitus and cardiovascular disorders are two ailments for which proso millet is recommended. In genetically obese type -2 diabetic mice fed Proso millet, plasma levels of adiponectin and high-density lipoprotein (HDL) cholesterol improved under high-fat circumstances. Under high-fat feeding conditions, proso millet has been demonstrated to enhance glycemic responses and insulin in genetically obese type 2 diabetic mice.<sup>[19]</sup>
- 3) *Shyamak* (Barnyard Millet):** Indications for *Shyamaka* (Barnyard Millet) include *Atisara* (Diarrhea), *Grahani* (Sprue) as it is *Sangrahi*, *Badda Vitkara* (compactness of faeces), *Santarpana Janya Vyadhi*, including *Sthoulya*, *Prameha* (Diabetes Mellitus), *Medoroga* (Diseases caused by excessive lipids) as it has *Guna* like *Shoshana* (dries up excessive moisture), *Ruksha*, *Baddha Mutrakara*, *Lekhaniya*.<sup>[20]</sup> Barnyard millet is indicated in conditions like Cardiovascular diseases, Diabetes mellitus. Rats fed with a diet of treated starch from barnyard millet had shown to lower blood glucose, serum cholesterol, and triglycerides compared with rice and other minor millets.<sup>[21]</sup> Barnyard millet has been reported to be beneficial for type 2 diabetics, especially the dehulled varieties, as the glycemic index for dehulled millet (50.0) and heat treated was 41.7.<sup>[1],[22]</sup>
- 4) *Kodrava* / *Koradusha* (Kodo Millet)** - As mentioned before *Koradusha/Kodrava* (Kodo millet) is recommended for *Grahani* (Sprue) due to *Param Grahi* (absorbs excessive fluids and helps for normal formation of feces and enhances

digestion), *Badda Vitkara* (compactness of feces), *Vrana* (Wound and ulcers), and *Santarpana Janya Vyadhi* like *Sthoulya* (Obesity), *Prameha* (Diabetes Mellitus), *Medoroga* (Diseases due to excessive lipids) due to *Kleda Shoshana* (Dries up excessive moisture), *Ruksha* (Reduces unctuousness), *Lekhana* (scraping), *Vatarakra* (Increases *Vata*), due to *Pitta-Rakta Shamaka* (Pacifies vitiated *Pitta* and Blood), *Vishartha* (Affected due to poison) as it is *Visha Hara* (Pacifies effects of poison) and other *Kapha-Pitta Pradhana Roga*.<sup>[1],[23]</sup> *Kodo* millet significantly decreases glycated haemoglobin levels, promotes the production of liver glycogen, and immediately boosts energy levels in diabetics. Strong antioxidants can be found in astonishing quantities in *Kodo* millets. This little millet contains phenolic compounds that lower LDL, or bad cholesterol, protect the heart, lower blood pressure, and prevent a number of other chronic diseases. These anti-oxidants also function to prevent the damage that free radicals do to tissues and cells, which includes cancer. *Kodo*, a fantastic substitute for rice and wheat, aids in weight loss by promoting metabolic activity and preventing metabolic syndrome. *Kodo* millets are suitable for gluten-intolerant people because they are free of gluten. For postmenopausal women exhibiting symptoms of cardiovascular disorders, such as high blood pressure and high cholesterol levels, regular ingestion of *kodo* millet is particularly advantageous.<sup>[10]</sup>

5) **Gavedhuka (Adlay Millets)** - *Gavedhuka* can be particularly helpful for *Sthoulya* (obesity), *Sthula Pramehi* (diabetes mellitus leading to overweight), and other *Kapha Pradhana Vyadhi* (*Kapha*-related diseases), as it is *Karshyakaari* (imparts weight loss), and *Kapha Hara* (pacifies *Kapha*), as was previously mentioned.<sup>[24]</sup> Diabetes, rheumatism, and other conditions were cited as uses for *Adlay* millet.<sup>[25]</sup>

6) **Yavanaala (Sorghum/ Jowar)** - As mentioned before *Yavanaala* (sorghum) is best advised in *Raktapitta* (Bleeding disorders), *Amlapitta* (Gastric disturbances), *Twak Roga* (Skin diseases) as it is

*Pittaghna* (Pacifies vitiated *Pitta*), *Rakta Shamaka* (Pacifies vitiated *Pitta*), *Trishna* (Thirst), *Sthoulya* (Obesity), *Prameha* (Diabetes Mellitus) as it is *Tikta-Kashaya* in *Rasa*, *Trishnaghna*, *Kaphahara*.<sup>[26]</sup> Because of certain characteristics, sorghum is good for consumption by those with chronic illnesses. Each sorghum nutrient has a unique nutritional role that may help to prevent and manage certain lifestyle diseases and disorders.<sup>[10]</sup> Sorghum's health advantages include:

- a) **Celiac disease (CD)** - one of the most common hereditary illnesses, produces reactions in people with certain genetic predispositions to the gluten proteins found in wheat and other cereals. This illness is brought on by the immune system's adverse reaction to gluten and can cause acute stomach pain. Sorghum doesn't contain gluten, thus it can be a safe diet choice for persons with celiac disease. Sorghum products were unable to alter the level of anti-transglutaminase antibodies when consumed continuously.<sup>[27]</sup>
- b) **Obesity** - In India, obesity is a growing issue and is positively correlated with several chronic illnesses, such as diabetes and cardiovascular disease (CVD). Evidence from experiments suggests that consuming more dietary fiber reduces the prevalence of obesity.<sup>[28],[29]</sup> Foods high in dietary fiber enhance the function of the large bowel and slow down digestion and absorption, lowering the risk of chronic diseases.<sup>[30],[31]</sup> *Sorghum* has special chemical and physical properties (bulk to the diet, viscosity, water holding, and absorption capacity), which control the consequent physiological behaviour. It is also high in dietary fiber. It contributes to hunger satisfaction, heightens satiety, and lowers risk factors for obesity.
- c) **Diabetes Mellitus** - is a serious metabolic condition that affects many nations. Whole grain-rich diets typically boost HDL cholesterol while lowering LDL cholesterol, triglycerides,

and blood pressure.<sup>[32]</sup> Boiling Yellow Jowar flour (coarse) resulted in a lower glycemic index than flour made from the same variety, according to studies on the processing and cooking of white and yellow jowar kinds. Similarly, chapati prepared from white Jowar flour showed a low glycemic index over yellow Jowar flour. These changes in the glycemic index due to processing and cooking play an important role in diets followed in the dietary management of diabetes.<sup>[33]</sup>

- d) **Coronary Heart Diseases** - Empirical data<sup>[34],[35]</sup> and indicate that regular whole-grain consumption lowers the risk of CVD.<sup>[36]</sup>
- e) **Cancer** - Sorghum's anti-carcinogenic properties have a long history. Studies conducted in vitro and in vivo have demonstrated the protective effects of sorghum consumption against cancer. Sorghum contains polyphenols and tannins that can inhibit the growth of cancerous and mutagenic cells in humans as well as promote the production of melanin.<sup>[37],[38]</sup>
- f) **Nartaki (Ragi/Finger Millet)** - Nartaki (Finger millet) can advise in *Raktapitta* (Bleeding disorders), *Amlapitta* (Gastric disturbances), *Twak Roga* (Skin diseases), as it is *Tikta-Madhura* (Bitter-Sweet), *Kashaya Rasa* (Astringent taste), *Sheeta* (cold in potency), *Snigdha Gunayukta* (Property of Unctuousness), *Durbala* (Loss of energy) due to *Balya Karma* (helps to improve energy), *Sthoulya* (Obesity) and *Prameha* (Diabetes Mellitus) as it is *Tikta-Kashaya* (Bitter and Astringent in taste) & *Balya* (Increases strength and energy).<sup>[1]</sup> In terms of nutrition, finger millet is a good source of vitamins, minerals, and fibre, particularly calcium. Benefits of finger millet for health:<sup>[39]</sup> Finger millet is very nutrient-dense and offers a number of health advantages. Below is a list of finger millet's nutritional information. Using finger millet or *Ragi* to lose weight Tryptophan, an amino acid

found in *Ragi*, reduces hunger and aids in weight management. *Ragi* gets digested at a slower rate thus keeping one away from the intake of excessive calories. Also, fibers present in *Ragi* give a feeling of fullness thus controlling excessive food consumption. Finger millet/ *Ragi* for bone health: *Ragi* is rich in Calcium which helps in strengthening bones. It is an excellent source of natural calcium for growing children and ageing people.

*Ragi* consumption helps in the development of bones in growing children and the maintenance of bone health in adults. *Ragi* keeps diseases such as osteoporosis at bay and could reduce the risk of fracture. Finger millet/ *Ragi* for diabetes: Finger millet's phytochemicals help in slowing the digestion process. This helps in controlling blood sugar levels in the condition of diabetes. In a study conducted in 2000, it was found that a Finger Millet based diet helps diabetics as it contains higher fiber than rice and wheat. Also, the study found that a diet based on whole-finger millet has a lower glycemic response i.e., lower ability to increase blood sugar levels. This is because *Ragi* flour contains components that reduce the starch's ability to be digested and absorbed.

Finger Millet/*Ragi* for lowering blood cholesterol: Finger millet contains the amino acids lecithin and methionine, which aid in lowering cholesterol levels by removing extra liver fat. For anaemia, use finger millet or *Ragi* because it contains a lot of natural iron. Consuming *Ragi* benefits anaemia patients.

*Ragi* or finger millet for relaxing You can ingest *Ragi*, a natural sedative. It helps with anxiety, depression, and insomnia (nights without sleep). *Ragi* can help with migraines as well. Various ways to consume millet: Millets are incredibly healthy, although their flavour isn't as wonderful as that of other cereals. There are numerous ways to prepare and consume these millets. The following list includes a few methods of consuming millet. Millets can be used in a variety of ways in our daily lives. Millet-based breads are healthier than traditional breads. It is possible to make millets *Laddoos* with flax seeds and dry fruits. Foxtail millets

can be used as a substitute for rice in the Indian dishes Sweet Pongal and Bisibelebhath.

You can also use other millets in place of rice in kheer and mango rice, such foxtail millets, barnyard millets, proso millets, and small millets. Various millets can also be used to make pancakes, *Dosas*, and *Idlis*. In this way, millet can be used to make a variety of delectable, wholesome, and healthful meals. In this sense, a sedentary lifestyle can nonetheless contribute to a healthy life.

You may make *Upma*, *Sweet Halwa*, *Barfis*, and veggie *Pulao* with a variety of millets.

All of the meals are incredibly nutritious and healthy. You may prepare chapatis with *Bajra*, *Sorghum* and *Ragi* that are high in fibre and simple to digest. Obese and diabetic people can specifically receive these chapatis. Children can also eat millet porridge with fruits and dry fruits. Children can enjoy millet-based cakes and biscuits that are highly nourishing and healthy.

You can also make cutlets, *Dhokla*, and many varieties of rice. Puffed or roasted millets can also be made.

## CONCLUSION

In today's fast-paced world, everyone favours fast food, which leads to malnutrition. Malnutrition can result from either over or undernourishment. There are several health advantages to including millet, an ancient, prized grain-like seed, in our daily diet. The *Santarpanajanya Vikaras* (diseases caused by overeating) and *Kapha-Pittaja Vikaras* (induced by the emergence of non-communicable diseases brought on by the sophisticated sedentary lifestyle) are the conditions when millets are most beneficial. A healthy lifestyle involves including millet in the diet and avoiding refined foods like rice, wheat, refined flours, processed meats, refined oils, packed & ready-to-eat foods, and milk. Because millets contain equal amounts of protein, carbs, and calories as typical cereals like rice, wheat, and barley, they have similar nutritional potential. The quantity of specific minerals, vitamins, and trace elements in millet, together with the presence of phytochemicals like polyphenols,

tocopherols, phytosterols, and dietary fibre, are generally responsible for the majority of the grain's health benefits. Numerous epidemiological studies have found a link between frequent consumption of millet grains and their derivatives and a lower risk of developing chronic diseases like diabetes, heart disease, cancer, and all-cause mortality.

Therefore, by adjusting their diet and increasing their daily intake of a wide variety of fruits, vegetables, and millet grains, consumers can enhance their health and reduce their risk of contracting chronic diseases. Millets can be incorporated into a diet by preparing a range of delicious and healthful foods. Millets are among the healthiest meals, but many still consider them to be a poor man's meal. For these reasons, it is important to apply standardisation processes and processing technologies to enable the widespread use of millet products. Finally, it is important to sell these products in a way that makes everyone aware of the value of millet.

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