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Review Article

CRITICAL ANALYSIS OF PATHYA IN *PANDU ROGA*

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ABSTRACT

Desire of life is the most important one to lead qualitative life. To fulfil this desire a healthy diet and regimen or lifestyle should be followed. Wholesome (*Pathya*) and unwholesome (*Apathya*) diet plays an important role to maintain health of healthy individual as well in treatment field to get relief from the diseased state. Ayurveda emphasizes upon the concept of *Pathya-apathya* along with medicine to complete the treatment procedure. *Panduroga* (anaemia) is a clinical condition represented with the reduction of haemoglobin concentration of blood according to the age, sex, and physiological condition of an individual. In developing countries, it becomes a global problem. In India more than 50% among the vulnerable groups such as pregnant women, infants, young children and adolescents are suffering from anaemia. Government of India has launched different types of programs, like National Nutritional Anaemia Control Program, National Iron Plus Initiative for Anaemia Control program, ICDS etc in different time according to prevalence of anaemia as a preventive measure. To reduce the prevalence of anaemia government has launched POSHANA ABHIYAN in march 2018 to make ANAEMIA MUKTA BHARAT. Prevention and control of anaemia is one of the key strategies of health sector which can be fulfilled by following different guidelines and comprehensive actions in terms of *Pathya*. Therefore, in this article we are trying to draw a concept of *Pathya* in relation to *Pandu+* (haemoglobin level- below the 10gm/dl and above 7gm/dl, through diet and regimen) which may helpful to eradicate prevalence of IDA.

INTRODUCTION

The word *Pandu* implies for both the altered skin color [1] and disease [2] itself. It is developed due to the *Dhatukshaya* and *Avarana.*[3] *Agni* and *Avarana,* plays a major role for the improper formation of *Dhatu* or catabolic changes in body tissues (*Dhatukshaya*) where the impaired iron absorption is occurred due to *Avarana.* Both are responsible for the nutritional deficiency. Acharyas has mentioned *Panduroga* under the *Santarapanaja* (overnutrition) and *Apatarpanaja (*undernutrition*) vyadhis*[4] in different *Samhita.* Inappropriate lifestyle in relation to *Ahara* and *Vihara* plays a prime role in the pathogenesis of *Santarpanaja* and *Apatarpnaja vyadhi.*

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The amount of iron obtain from diet should be sufficient to replace the normal loses through sweat, urine and stool. Impaired brain function, GIT function, altered hormone production and metabolism are caused due to anaemia or *Pandu*.[5] The science of human nutrition is mainly concern with defining the nutritional requirements for the promotion, protection and to maintain the health in all age groups of population. In this context the term "recommended dietary intake or allowance' (RDA) has been widely accepted. It is average daily dietary intake along with nutritional value level sufficient to meet the nutrient requirement of nearly all (97-98%) healthy individuals as per particular life stage and gender group. Dietary insufficiency and unhealthy lifestyle are responsible for the malnutrition.[6]

Pathya or wholesome diet is defined as a basic prerequisite to sustain the life in relation to body and mind of an individual without causing any adverse effects. It also plays a major role in prevention.[7] Considering this Ayurveda has explained and detailed

it in *Dincharya*[8] (daily regimen) and *Ritucharya* (seasonal regimen).[9] Maximum *Pathya* mentioned are appetizer, digestive, carminative in the form of *Yavagu, Peya, Vilepi, Manda, Odana* etc and prescribed according to the disease condition.

According to the dietician's theory 'what people eat is not calories but food and consideration of fads, flavour's and variations of appetite can make nonsense of the dietician's theory.' That is to say, a given diet or drug will not be effective if it is taken unwillingly by the individual person, it will more effective only when the individual taken it willingly. The energy value of foods has been expressed in terms of the kilocalorie (kcal). Individual energy requirement is defined as the level of energy intake from food that balances energy expenditure, which are required for basal metabolism, daily activities such as walking, sitting, standing, dressing, etc and for occupational work depending on individual. [10] According to the WHO, the energy requirements of Indians at different ages (2010) is as follows. [11]

Age Group	Category	Body Weights	Requirements (Kcal/D)
Men	Sedentary work	60	2320
	Moderate work	60	2730
	Heavy work	60	3490
Women	Sedentary work	55	1900
	Moderate work	55	2230
	Heavy work	55	2850
	Pregnant women	55 +	+350
	Lactation		+600
Boys	10-12 years	34.3	2190
Girls	10-12 years	35.0	2010
Boys	16-17 years	55.4	3020
Girls	16-17 years	52.1	2440

Source of energy is carbohydrates, fat and protein and they supply energy at the following rates- carbohydrates- 4kcal/g, fat- 9kcal/g, protein- 4kcal/g and dietary fibre- 2kcal/g. macronutrients (provides energy in the form of carbohydrates, protein and fat) and micro nutrients (for the functions of the body in the form of vitamins and minerals) elements have been required in daily basis for the maintenance of *Dhatusamya*. According to the dietary guidelines for Indians requirements of nutrients in daily basis are carbohydrates 290-300gm/day, protein-55-60gm/day, fat-25-40gm/day, calcium-600mcg/day, iron-17-21mg/day, vitamin A (B carotene & retinol)-600-4800mg/day, vit C-40mg/day, Vit-b12-1mg/day, magnesium-310-340mg/day & Zinc -10-12mg/day.[12]

Pathya Kalpana is prescribed as a healthy diet plan for healthy one in practical field to protect against malnutrition in all its forms, non-communicable diseases including diabetes, heart diseases, stroke and cancer and for the diseased one to keep their channels in healthy stage in respect their own functions, then treatment will be more affective. *Apathya Kalpana* (unhealthy diet) along with lack of physical activity is responsible for global risk to health.

Need for the Study

India comes under the countries with high prevalence of anaemia. It is widely prevalent to all age group. Nearly 58 percent in pregnant women, 50% of non-pregnant women, 56 percent among adolescent girls, 30 per cent in adolescent boys and around 80% in children under two years of age are suffering from this disease as a vulnerable group. According to WHO around 30- 40% of industrialized countries are iron deficient, which include majority of south Asia (WHO, 2001).[13] Present study shows that about 23-33% from the age group of 21-30 years are suffering from the *Pandu*. Therefore, this article is designated to make a pathway to prevent iron deficiency and increase bioavailability of Iron in the body via food-based approaches.

MATERIALS AND METHODS

After thorough study of the ancient authentic Ayurvedic literature and related books of modern medical science regarding the *Pathya* in terms of healthy diet, the effort has been made to make a clear concept and proforma of diet for *Panduroga* which will be helpful for the scholars and clinicians to maintain *Dhatusamya* (equilibrium condition of *Dhatu)* to reduce the prevalence of *Pandu* (anemia) with advising precautions. All relevant information has been collected and made an interpretation accordingly.

RESULTS AND DISCUSSION

Concept of *Pathya*

पथ्य - त्रि० पथि साधु दिगा| यत् इनो लोपः ।

हिते, चिकित्सादौ हितकारकभोज्यद्रव्यभेदे | [14]

Pathya means suitable for the way or course of anything, which is healthy for treatment or in a medical sense of diet, types of diet regarding wholesome.

According to *Acharya Charaka*

पथ्यं पथोऽनपेतं यद्यच्चोक्तं मनसः प्रियम्|
यच्चाप्रियमपथ्यं च नियतं तन्न लक्षयेत्||
मात्राकालक्रियाभूमिदेहदोषगुणान्तरम् | प्राप्य तत्तद्धि
दृश्यन्ते ते ते भावास्तथा तथा||
तस्मात् स्वभावो निर्दिष्टस्तथा मात्रादिराश्रयः|
तदपेक्ष्योभयं कर्म प्रयोज्यं सिद्धिमिच्छता||

Dietary regimen and activities which are helpful for the body and mind without any undesirable effect on health are considered as *Pathya* (wholesome diet). Opposite to the *Pathya* regarded as *Apathya.* Effects of *Pathya* or *Apathya* depend on the dosages, time, mode of preparation, geographical location, the body constitution and *Dosha*. The physician who desires success in treatment must prescribe dietary articles considering the proper dose etc. and natural properties of drugs. [15]

Acharya Charaka also mentioned about the dietary articles for regular consumption by healthy person to preserve the health and prevent onset of diseases. They are- *Shastika, Shali, Mudga, Saindhava, Amlaka, Yava,* rain water, milk, ghee, flesh of *Jangala* animals and honey. [16]

Concept of *Pandu Roga*

Pandu in respect of anaemia comes under the category of *Rasa-pradosaja* [17] and *Rakta-pradosaja vyadhi* and it also mentioned under *Santarpanaja* and *Apatarpnaja vyadhi,* which has mentioned in different Ayurvedic compendiums. It is developed in two ways i.e., *Santarpanottha* (anemia due to over-nourishment) and *Apatarpanottha pandu (*anemia due to under-nourishment). Palpitation, dryness of the skin, absence of perspiration and fatigue is the cardinal features of *Pandu.* [18] Pathology of *Santarpanaja* anaemia is developed after getting obesity.[19] Obesity involves impaired duodenal iron absorption associated with low expression of duodenal ferroprotein (FPN) along with elevated hepcidin concentration, causes – decrease serum iron. The low iron status in overweight individual results in combination of nutritional (reduced absorption) and functional (increased sequestration) iron deficiency.[20] Acharya Charaka has described five types of *Panduroga* (anaemia). They are as follows *Vataja, Pittaja, Kaphaja, Sannipataja* and *Mridbhakshanajanita pandu.* [21] Acharya Susruta said *Panduroga* is four types. They are *Vataja, Pittaja, Kaphaja* and *Sannipataja panduroga.* [22] Acharya Harita mentioned 8 types of *Panduroga*. He added three new types namely (*Shakhasrita* and *Kostharita) Kamala* and *Halimaka*, along with other same five types previously mentioned by Charaka. [23]

Emergency basis anaemia caused due to instance performing surgery. The initial stage of anemia is corrected by blood transfusion. But the preventive measures in the form of dietary management and taking measures to correct losses or malabsorption are the preferred methods of management for *Pandu* or nutritional deficiency anaemia.

Pathya* in *Pandu Roga* according to *Ayurveda

Varga	***Caraka* [24] *Samhita***	***Susruta Samhita* [25]**	***Yoga Ratnakar* [26]**	***Bhavaprakash* [27]**	***Bhaisaja Ratnavali* [28]**
Kritanna Varga	*Peya, Vilepi, Yavagu, Yusha, Khada, Kambalika*	*Peya, Vilepi, Yavagu,*			
Shamidhanya	*Mudga, Adhaki, Masura*	*Mudga, Adhaki, Masura*	*Mudga, Adhaki, Masura.*	*Mudga, Adhaki, Masura*	
Shukadhanya	*Purana Yava & Godhuma, Jeerna Shali,*	*Purana Yava & Godhuma, Jeerna Shali,*	*Purana Yava & Godhuma, Jeerna Shali,*	*Purana Yava & Godhuma, Jeerna Shali,*	
Gorasa Varga	*Go Dugdha, Aja Dugdha, Takra, Ghreeta, Navanita,*				
Mamsa Varga	*Jangala Mamsa Rasa*	*Jangala Mamsa Rasa*	*Jangala Mamsa Rasa*	*Jangala Mamsa Rasa*	

Shaka Varga					*Patola, Kushmanda, Raw Banana, Jivanti, Guduchi, Chaulai, Punarnava, Dronapuspi, Brinjal, Garlic, Saunf, Sunthi*
Phala Varga		*Badara, Amalaki, Draksha,*			*Pakwa Amra, Haritaki, Bimbi, Amalaki*
Ikshuvarga		*Ikshurasa, Guda, Sarkara,*			
Mutra Varga	*Gomutra*				
Madyavarga	*Tushodaka, Sauviraka, Kanji, Chukra*				
Anya	*Yava Kshara,*				

Ahara dravya such as *Adraka, Bimbi, Chukra, Draksha, Haridra, Katphala, Lasuna, Pippali*, *Kanji* etc are mentioned in different Nighantu under the heading of *Pathya* of *Panduroga*

Pharmacological Activities of *Pathya-ahara*

Name of *Dravya*	Chemical Composition	Mode of action
Jeerna Shali (old-types of rice)	It contains protein, leucine, lysin, tyrosine, valin. *Rakta shali* is rich source of iron.	It has *Snigdha* and *Vatahara* property. It gives strength, satiation along with nutrition. It stimulates the digestive power.
Jeerna Yava (old-barley)	Barley grain consists of about 65-68% starch, 10-17% protein, 2-3% free lipids, 4-9% β-glucans, 1.5-2.5% minerals (such as zinc (up to 50mg/kg), iron (up to 60mg/kg), calcium, phosphorus) and soluble fibers along with higher amounts of vitamins A, E & B 12 than the other cereals[29].	The amount of Fe supply from barley is very sufficient. Due to presence of chlorophyll, it is good for anemia. Chlorophyl stimulates haemoglobin production. It contains Vit-B-12 which helps to uptake of iron to combine with globin to form haemoglobin.
Chukra (Rumex vesicarius)	Tartaric acid, vitamin-B12, calcium polyphenolic. Tamarind fruit is also considered as a digestive, carminative, laxative, expectorant and a blood tonic.[30]	It contains tartaric acid which helps promoting iron absorption and Vit-B 12 which helps to uptake of iron to combine with globin to form haemoglobin.
Draksha [31] (Type of Grapes)	Tannins, tartaric acid, organic acid and amino acid	Contains tartaric acid and amino acids which helps promoting iron absorption
Haridra (Turmeric) [32]	Anti-inflammatory and anti-neoplastic agent. It contains curcumin.	Turmeric has ability to absorb intestinal iron due to presence of Curcumin. It binds ferric iron (Fe3+) to form a ferric-curcumin complex and represses the synthesis of hepcidin. One of the peptides which helps to iron balance in blood. It also has anti-inflammatory, anti-oxidant, antihepatotoxic activity.
Lasuna (Garlic) [33]	Allicine	The garlic enhances iron absorption by increasing ferroportin expression in to the blood stream, when given in the presence of iron. Excessive intake of garlic causes haemolytic anemia. But aged garlic extract has role to prevent sickle cell anemia.
Pippali (Long pepper) [34]	Piperine	Inflammation leads to an increase in Hepcidin expression. Black paper prevents anemia through reduction of inflammation caused by

		hepcidin over-expression.,
Sunthi, Marich (Dry Zinger, Black paper)	Black paper contains piperine. Zinger has Water–9.4gm, Protein–9.1gm, Fat–6.0gm, Total carbohydrate– 70.8gm, Fibre–5.9gm, iron– 12mg, magnesium–184mg, Phosphorous- 148mg, potassium-1342mg, sodium-32 mg, zinc–5mg and niacin-5mg and Thiamine–0.035%, Riboflavin–0.015%, Niacin–0.045%, Pyridoxin–0.056%, Vitamin C–44%, vitamin A- Traces and vitamin E Traces-Total-44.15%. It is rich in natural polyphenols, which are prebiotics to the gut microbiota.[35]	The binding potential of piperine with SMAD1 and STAT3 proteins supported the proposed inhibition of hepcidin activating proteins. We know that hepcidin is a circulatory hepatic peptide hormone which is responsible for systemic iron homeostasis. Inflammation leads to an increase in hepcidin expression, which dysregulates body iron level [36]. Ginger's bioactive polyphenols promotes gut health and reduces the unwanted side effects of iron tablets. Ginger polyphenols also responsible for to enhance the effectiveness of erythropoiesis [37]. Ginger (antioxidant agent) helps to reduce oxidative stress for iron supplements and also helps in iron absorption [38]. It has *Katu Pradhan rasa*. Due to this it promotes *Agni*, manages *Aruchi* and improves iron bioavailability.
Kanji (Prepared food with sour taste)		A study has also shown the mechanism for the increased bioavailability of iron from lactic fermented vegetables is likely an effect of the increase in ferric iron (fe3++) species caused by the lactic fermentation
Go-Dugdha (Cow's milk)	Cow milk is an iron-poor food. A 240ml milk serving 0.07mg Iron. Rich source of calcium.	Individuals are benefited by calcium without negatively affecting their iron.
Madhu (Honey) [39]	Honey has a content of 80-85% carbohydrate, 0.3% protein, phenols and 31% fructose.	Honey helps to increase antioxidant agents, serum Iron, monocytes, lymphocytes (slightly), vitamin C concentration by beta-carotene, uric acid and glutathione reductase. It caused slight elevation of zinc and magnesium, hemoglobin, and packed cell volume in blood.
Karavellaka (Bitter melon)	Protein, vitamin-C, folic acid, calcium, sodium, potassium, iron, copper, zinc, etc.	Extract of *Momordica charantia* responsible to increase haemoglobin.
Guda (Jaggery) [40]	It is the rich source of iron.	This helps provide the body with the necessary iron that it needs to maintain an optimum hemoglobin count. It is the rich source of iron, magnesium, calcium and others electrolytes.
Kushmanda (Winter melon)	*Kushmanda* is rich in vitamins B1 B3 and C. Possesses various minerals like calcium, sodium, potassium, selenium and 96% of water.	A good source to maintain energy levels.
Kadali (Tarun), (Raw banana) [41]	Raw banana contains campesterol (4.1mg/100g), stigmasterol (2.5mg/100g) and β-sitosterol (6.2mg/100g) along with Zn, Ca and Fe.	Supplementation, fortification and biofortification are strategies that have implemented worldwide to increase iron intake. Banana is a potential vehicle for iron fortification. It is the rich source of vit-E and flavonoids.
Vartaka (Brinjal)	Contains-thiamine, niacin, iron, copper, vit-B6, potassium and manganese.	
Adhakii (Pigeon pea)	It is the rich source of amino acid, vit-B 12, niacin etc.	Vit-B 12 helps to uptake of iron to combine with globin to form haemoglobin.

Godhuma (Types of Wheat)	It is dietary source of iron, & Zinc 3-4gm iron present in 100gm.	
Bimbi (Ivy gourd/Scarlet gourd/ Gentleman's toes)	b-sitasterol, urosilic acid etc magnesium, potassium, cadmium, iron etc.	It acts against hepato toxicity.
Punarava (*Boerhaavia diffusa*)	b-sitasterol, urosilic acid etc. magnesium, potassium, cadmium, iron etc.	
Amalaki (Indian gooseberry). [42]	Vit-C, Gallic acids, Amlic acid, phyllantine etc.	The better dialysability of iron obtained with *Amlaki* juice. It is a richest source of vitamin c which reduces ferric iron into ferrous and helps in producing red blood cells. Also, *Rasayan* to prevent *Ojokshaya*.
Mudga (Green gram beans)	It is a dieter friendly, rich in iron (3.9mg/100gm) and potassium (1150mg /100gm)	*Mudga* is *Madhur*, *Kshaya ras, Laghu ruksha, Sheet virya, Madhura vipaki* and increase *Kapha,* decrease *Vata-pitta*.
Masura (lentil)	It is the rich source of carbohydrates, protein, fat, and numerous essential nutrients such as folate, manganese, thiamine, potassium, phosphorus, iron and Zinc.	Sweet and astringent, easy to digest, increase *Pitta*, relieves *Vata* and *Kapha*.
Takra (buttermilk)	It contains lactic acids.	Different studies have been carried out on the effects of dairy products in iron absorption. Some studies suggest that consumption of dairy products in daily life probably has no effects upon iron absorption. But lactic fomentation of foods increases iron bioavailability.
Patol (Pointed gourd)	Vitamin-C, tannins, saponins, vitamin-A etc.	It has hepatoprotective activity.
Jangal Mamsarasa (Soup prepared by meat-chicken)	It (Chicken) contains protein- 24.68gm, Fat-12.56gm, Vit-A & B5, iron-1.16mg/100gm.	
Navanitaka (Butter)	It has 80% milk fat, around 60% water, 1.5-2.0% salt & 2% other milk solids. It also contains 67% saturated fat approximately, 29% monosaturated fat, 4% polyunsaturated fat.	Saturated fat increase iron absorption by changes in the fatty acid composition of the intestinal mucosa.
Ghrita	Contains 98.9% lipids, 0.3% water, <0.9% non-fat solids. Ghee is also an important carrier of fat-soluble Vitamins (vit- A.D.E.K).	Regular consumption of ghee in adequate quantity, imparts various health benefits such as binds toxins, enhance complexion of body, rejuvenate the eyes and increases physical and mental stamina etc. [43]
Vilepi		It is beneficial for the heart, stimulates appetite, pacifying thirst and increase strength. It light in nature. [44]
Peya		It is beneficial for hunger, thirst, diseases of abdomen and fever. It acts as diuretic and carminative. [45]

Nutritive value of *Pathya* advised in *Panduroga*[46]

Name of the Food (100gm)	Carbohydrate (Gm)	Protein (Gm)	Fat (Gm)	Iron (%)	Calcium (%)	Vit-A, Vit-C (%)	Magnesium (%)	Calorie (kcal/100 gm)
Rice	28	2.7-3.0	0.3-0.8	1	1	-	3	100-130
Mudga	58	25	0.2	18	-		8	339
Adhaki	63	22	1.5	28	13	-	45	343
Masura	56	21	1	35	6	-	-	358
Kukkuta mamsa	-	34.0	3.6	5.8	1.2	Vit-A-0.4		165
Patol	2	2	0	0	2	Vit-A & C-2		215-0
Kushmanda	11	2	0			Vit C-14	12	21-35
Kadali	51.4	2.5	0.2	15	10	114IU/19.6mg		99-180
Punarnava	10.56	5.75	1.61					
Amra	15	0.8	0.4	1	1	60%, 21%	-	60
Fish	0	15.57	2.73	2.19	219.3mg	4.2IU	-	88-100
Keshara	65.37	11.43	5.05	11.10mg	111mg	530IU	-	300-310
Brinjala	6	1	0.2	1		-	-	25
Lasuna	45	8.7	0.7	2.3mg	246mg	42.4mg		200
Pippali	-	-	-	3.61mg	268mg			
Sunthi	18	1.8	0.8	3	1			80
Dadima	18.7	1.67	1.17	0.30mg	10mg			
Haritaki	1	1.4		30mg	3	Vit-C10.5mg	-	5
Milk	5	3.4	2.0	1gm		12		70
Haridra	64.9	7.83	9.88	41.42mg	183mg	25mg	-38mg	354
Bimbi								19kcal/ 100gm
Amalaki	8	1	1	0.9mg	25mg	290IU, 478mg	10mg	33

To achieve dietary adequacy of iron by using food approaches, food preparation and dietary practices plays an important role. As cereals and tuber-based diets are the sources of low iron. But legumes can improve the iron content if it is taken as daily diet. Food based approaches are not sufficient to increase the level of iron and zinc unless some meat and poultry or fish are included. Avoid some inhibitor and intake some enhancers' factors which are essential to absorb iron. Enhancers factors such as heam iron which are present in meat, poultry, fish and seafood, consumption of ascorbic acid and vit-C, which present in fruits, juices, green leaves, cabbage and fermented and germinated food. The factors, responsible for the inhibition of iron absorption in intestine are high-extraction flour cereals grains, nuts, legume, tea, coffee etc. [47]

CONCLUSION

Acharya Kashyapa has stated *Ahara* as *Maha baisajya*. All the beings are originated from the food. Food habits or requirements of *Pathya* depend on individual. The geographical variation, psychological condition, status of health, power of digestion etc of the person is responsible to make a dietary habit of a healthy or diseased one. Intake of *Pathya* with equitable *Manasika bhava* to achieve a healthy body and prevents the body from upcoming diseases. So, from the above discussion we can make a sample meal plan for adult man and women to prevent *pandu*, which will be beneficial for the physicians in the field of clinical practice. Anaemia treatment plans are individualized, most required 150-200mg iron daily.

After thorough review of the *Pathya* of *Panduroga* which have been mentioned in different Ayurveda compendium suggested following diet plan for advices in clinical practice depending on digestive power of individual.

Meal Time	Food Group	Raw	Cooked Recipe	Servings Amount
Breakfast	Lemon/ *Dadim* juice/ *Ikshurasa* Sugar	250ml 15gm	Milk	1 cup
	Cereals pulses	70gm 20gm	Breakfast item	
Lunch	Cereals Pulses Vegetables Vegetables Fish/meat Fruits-	120gm 20gm 150gm 50gm 100gm 100gm	Rice/*phulka* Dal Veg curry Veg salad Fish/meat curry Seasonal or mentioned food	1 cup/ 2 in number. ½ cup ½ cup 7-8 slices 2 small nos./ 4in number. 2 (medium in size)
Evening	Milk products *Guda*	50 gm 15gm	Milk chick (Chana) snacks	½ cup
Dinner	Cereals Pulses Vegetables milk	120gm 50gm 120gm 100gm	Rice, *phulka* Dal Veg curry Milk + *Keshar/* pinch of *Haridra*	1 cup/2 in number. ½ cup ½ up 1 cup

1 cup =200ml
Breakfast- 2 biscuit, 2 *Idli*, Poha, *Sattu* prepared by *Yava* or *Godhuma*.
Cereals-*Shalidhanya, Suka Dhanya, Godhum, Yava* in the form of *Peya, Vilepi, Manda, Odana* and *Yavagu*.
Pulses- *Adhaki, Mudga, Masura*
Vegetables- Vegetables curry prepared with *Patola, Kushmanda*, raw Banana, *Jivanti, Guduchi, Chaulai, Punarnava, Dronapuspi,* Brinjal, Garlic, *Saunf, Sunthi, Karavellaka, Pippali* etc.
Fish and meat- *Kukkuta* Meat*, Rohita* Fish, and Iron contained sea food.
Fruits- *Pakwa Amra, Dadim, Draksha*, 1 cup =200ml
Breakfast- 2 biscuits, 2 *Idli*, *Poha*, *Sattu* prepared by *Yava* or *Godhuma*.
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Fish and meat- *Kukkuta* Meat*, Rohita* Fish and Iron contained sea food.
Fruits- *Pakwa Amra, Dadim, Draksha*, *Marich,* Salt*, Amalaki, Dadima* etc.

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