



Mono-Rasa Dominant Diet During Pregnancy & Congenital Anomalies

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Diet of the pregnant woman directly influences the growth and development of fetus in utero right from day one of conception. Balanced or proper diet as per Ayurvedic concept is not only the quantity of food but quality i.e. containing Shadrasas (six tastes) and when consumed by pregnant woman helps in over all growth and development of the fetus. If a pregnant woman indulges in the consumption of particular rasa for long the fetus will suffer from some anomalies/congenital deformities. As per fundamentals of Ayurveda, all the five mahabhutas are there in all the six rasa(taste)s but the manifestation depends on the predominance of one or more of the mahabhuta. As per the theory of organogenesis in Ayurveda various components of the fetus are derived from various mahabhutas so as consumption of particular rasa(taste) affect particular body part of the fetus and excessive and continuous consumption of particular rasa(taste) leads to anomalies as per the panchbhautic constitution of that particular rasa(taste).

Key Words: Rasa, Fetus, Mahabhuta, Congenital anomalies.

Ayurveda- a complete and holistic health science, not only deal with preventive and curative aspects of health but also has a strong footings in the field of healthy progeny. *Shadgarbhakara-bhava* (Six procreative factors of progeny) have been propounded in the *ayurvedic* classics viz. *Matrija*(mother), *Pitrija*(father), *Atmaja*(soul), *Satmyaja*(wholesome practices by mother) , *Rasaja*(diet of the mother) and *Satvaja*(psychological health of the parents)¹.

Healthy mother, father, proper diet of the mother, practice of wholesome living and dietary regimen and healthy mind/psychological status of parents & good deeds of soul in previous incarnation play a prime role in achieving healthy offspring, thus structuring a healthy family, society and Nation.

Right from the time of conception till delivery it is the mother who carries and nourishes the fetus. Hence mother is described first among the factors responsible for proper growth of the fetus. Fetus obtains its subsistence by *Upasneha* and *Upasweda* (*exudation*) processes till the organogenesis and afterwards through *Nabhi Nadi* (*placenta & umbical cord*)² which indicates diet of the pregnant woman directly influences the growth and development of fetus in utero right from day one of

Shad rasa are the six different tastes that are known to taste buds viz. sweet, sour, salty, bitter, pungent, and astringent. In Ayurveda, these are mentioned³ as *Madhur*, *Amal*, *Lavana*, *Katu*, *Tikta* and *Kshaya Rasas*, these not only render the differentiation of tastes but also provide a good contribution to basic health.

Taste	Primary Actions	Common Sources
Sweet	Builds tissues, calms nerves	Fruit, grains, natural sugars, milk
Sour	Cleanses tissues, increases absorption of minerals	Sour fruits, yogurt, fermented foods

Salty	Improves taste to food, lubricates tissues, stimulates digestion	Natural salts, sea vegetables
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Bitter	Detoxifies and lightens tissues	Dark leafy greens, herbs and spices
Pungent	Stimulates digestion and metabolism	Chili peppers, garlic, herbs and spices
Astringent	Absorbs water, tightens tissues, dries fats	Legumes, raw fruits and vegetables, herbs

For a virtuous and sustained healthy living, it is important to cultivate the habit of using all the six tastes in daily diet. The knowledge of their actions on the body systems can prove helpful so as to supplement the desired taste, in accordance to the body requirements and the timely curb on the tastes more extensively used, can help to keep the disease at a distance. A balanced intake of all the six tastes ensures good health.

Balanced or proper diet as per *Ayurvedic* concept is not only the quantity of food but quality i.e. containing Shadrasas (six tastes) and when consumed by pregnant woman helps in formation of *Sapta Dhatu* (body tissues) as well as state of *Mana* (mind); in other words responsible for the over all growth and development of the fetus, So Mother's diet should contain all the *rasas* which give strength and complexion to fetus therefore emphasis has been given by the ancient seers on the diet of the pregnant woman to avoid any untoward effect on the growing fetus⁴.

Improper dietetic habits and Nutritional deficiencies in pregnant ladies may leave their impact on the developing embryo⁵. These abnormalities may be congenital in nature or can become manifest/ visible during the viable growth period of that particular fetus in its later life time.

Acharya charaka has mentioned that all the six *rasas* if properly used jointly or severally in proper dose bring happiness to all living beings. Otherwise they are equally harmful to all⁶. In a review of the literature from the classical *Ayurvedic* texts to current *Ayurvedic* writers, as well as recent scientific evaluations, the effects of overuse of any taste has been shown to have serious negative outcomes. Measurement of food is, in fact, of two types, viz. food as a whole and of its different ingredients having different tastes like sweet, sour, etc. If food as a whole is taken according to the prescribed measurement but its ingredients having different tastes like sweet, sour, etc. are not in prescribed ratio, the equilibrium of *dhatu*s and *dosh*as gets definitely disturbed due to imbalance in the ratio of the composing *rasas* (tastes). Consequently the timely digestion of food as a whole will also be affected." In the same way during pregnancy, *rasas* (tastes)

maintain the body if used in proper quantity, proportion and quality, otherwise they vitiate the *doshas* and effect the health of the mother and fetus. If a pregnant woman indulges in the consumption of particular rasa⁷ for long the chances of nutritional deficiency increases and in turn if in excess the fetus will suffer from some anomalies/congenital deformities e.g.:

- Daily excessive intake of sweet (*Madhura*) articles by mother except milk – child suffers from *prameha* (urinary disorders), obesity and dumbness.
- Using excessively/daily sour(*Amla*) articles in diet- child suffers from *raktavata* (blood & vascular diseases), skin and eye disorders.
- Daily excessive use of salty(*Lavana*) articles -- Early wrinkling, graying of hair and baldness in the child.
- Daily excessive use of pungent (*katu*) articles -- Weak, possess less quantity of *shukra/ reproductive tissue* and may become infertile in later life.
- Daily excessive use of pungent or bitter (*tikta*) articles -- Suffers from emaciation (*shosha*) or edema (*shopha*), weak, scraggy and may have less digestive powers.
- Daily excessive use of astringent (*kashaya*) articles -- Blackish (of dark complexion), suffers from *anaha* (flatulence) and *udavarta* (eructation).

Therefore the consumption of any one rasa in excessive amount by a pregnant woman has been condemned in the *Ayurvedic* classics.

As per the basic fundamentals of Ayurveda, as a matter of fact, all the five *mahabhutas* are there in all the six *rasas* but the manifestation of the various rasas depends on the predominance or otherwise of the qualities of one or more of the mahabhuta⁸. Of the six tastes, sweet taste abounds in the qualities of jala mahabhuta, sour taste of *prithvi* and *agni*, saline taste of *jala* and *agni*, pungent taste of *agni* and *vayu*, bitter taste of *vayu* and *akasha* and astringent taste of *vayu* and *prithvi*. So like the individuals belonging to the vegetable and animal kingdom of diverse types, depending upon their colour and shape(owing to the predominance or otherwise of the various *mahabhutas*.(Ch. Su. 26/40 p 463).

Body Components of fetus derived from Mahabhutas^{9,10} :

Sr. No.	Mahabhuta	Organs derived
1	<i>Akasha</i>	<i>Shabda, Srotrendiya, Laghava, Saukshmya, Viveka, Srotas, Chhidras</i>
2	<i>Vayu</i>	<i>Sparsha, Sparshanendriya, Chesta, Dhatusvyuhana, Uchchhvasa</i>
3	<i>Agni</i>	<i>Rupa(Form), Chkshu indriya(Visual apparatus), Pakti(Metabolic enzymes &metabolism), Ushma(Body heat), Prakasha, Pitta, Teja</i>

4	<i>Jala</i>	<i>Rasa(Taste), Rasanendriya(gustatory system), Shaitya, Mardava(softness), Sneha(fat), Kleda, Asrika(blood), Shukra(semen), Urine, Vasa, Meda(fat).</i>
5	<i>Prithvi</i>	<i>Gandha, Gandhendriya(Olfactoryapparatus), Gaurava & Sthairya(Heaviness and Stability), Murti(Structure of the body), Kesha, Asthi</i>

These description as derived from various *mahabhutas* is to impart knowledge regarding the treatment of diseases caused in these organs by the excess or diminution of the respective *mahabhutas*. The organ/phenomena derived from *mahabhutas* gets increased by the administration of the drugs having particular *mahabhutas* in composition, by the administration of drugs having opposite qualities, that particular organ/phenomenon gets reduced.

Madhura rasa or sweet taste – Sweet taste results from the combination of Water and Earth and is heavy, moist, and cooling by nature. It is found in milk and milk products (like butter, ghee, and cream), most grains (especially wheat, rice, and barley), many legumes (like beans and lentils), sweet fruits (such as bananas and mangos, dates, etc.), and certain cooked vegetables (such as carrots, sweet potatoes, and beets). In moderation, it promotes the growth of plasma, blood, fat, muscles, bones, marrow and reproductive fluids. In excess, sweet produces many disorders in all *doshas* that's why even though *madhura rasa* possesses valuable properties, when used in excess in isolation, excessive indulgence by vitiating *kapha* results in the production of corpulence, softening of the tissues, lethargy, hypersomnia, heaviness of the body, lack of desire to eat, the impairment of *agni* (or the digestive process) asthenia, hypertrophy of the tissues in the mouth and throat, dysuria, cough, nasopharyngeal catarrh, intestinal stasis, fever preceded by chill, distension of the abdomen due to flatulence, the feeling of sweet taste in the mouth, vomiting, coma, loss of voice, scrofulous gland in the neck, elephantiasis, laryngitis, excessive secretion of mucous, discharge from the bladder, exudation from the blood vessels and throat, eye diseases with excessive lacrimation and such other diseases¹¹. If a normal person use *madhura rasa* in excess he can suffer from such type of problems then what will happen to a pregnant female and a fetus to which the *rasa* from mother goes whatever she consumes; naturally fetus will also get afflicted to these type of problems.

Body Components of fetus derived from the constituents of Madhura Rasa:-

Prithvi Mahabhuta

Gandha & Gandhendriya(Olfactory apparatus)

Gaurava & Sthairya(Heaviness and Stability)

Murti (Structure of the body)

Kesha and Asthi (Hair& bones)

Jala Mahabhuta

Taste & gustatory system

Lymph,blood, semen,urine, fat

Coldness, softness, unctuousness

Madhura rasa is made up of *prithvi* and *jala mahabhutas* as per pentavalent theory. If a pregnant woman take substances in excess which are having *madhura rasa* then the organs produced from the constituent *mahabhutas- jala* and *prithvi* may have some anomalies and the fetus may suffer from the disease related to such organs. In this way there can be anomalies in *Rasa, Rasanendriya, Kleda, Gandha, Gandhendriya, Bones* etc. If there will be anomaly in *Rasanendriya- jihwa-* tongue than the fetus can be dumb, If there will be anomaly in *Rasa, Kleda* than the fetus may suffer from *Prameha*, Due to the effect on *rasa, kleda* and bones the fetus may be *atisthula-* over weight.

Substances which taste sweet or are sweetish, generally belong to the category of organic substances known as carbohydrates and a few to proteins, although some metallic compounds such as formate, acetate, propionate and isovelarianate of lead as well as beryllium salts also give this taste. Carbohydrate in the form of glucose is an indispensable component of blood. Its concentration in and about the cells in mammals is normally about 0.1% of the weight. It is stored up in the form of glycogen in the liver and muscles. While proteins are the building materials of the body and fat represents essentially a fuel reserve, the carbohydrate is the main, readily available fuel substance. It also enters into the constitution of the protoplasm, especially the nucleus. The proper functioning of the body, including the various organs and special senses, is almost exclusively dependent on it. The carbohydrate or at least some component of its molecule can be converted into fat. Starches and sweets are known generally to fatten animals. Hogs, for example, are mainly fed with starches which have been shown to be responsible for the addition of fat in their body.

The effects of excessive indulgence in substances tasting *madhurarasa*, as noted by authors of *Charaka Samhita* and *Ashtanga Hridaya* have to be liberally interpreted in respect of two important aspects – a) the consumption in excess of sugars, and b) the impaired utilization or the disposal of carbohydrates as a result of metabolic disturbances. For the several effects noted by the two acharyas include symptom, some characteristic of digestive glycosuria and others, of hyperglycaemia. For example, the over indulgence in carbohydrates or substances tasting *madhura rasa*, has been stated to result in the accumulation of fat in the body, leading to corpulence. In the "British Journal of Nutrition" it was reported that ingestion of pure carbohydrate or pure protein resulted in lower overall cognitive performance. Their findings supported the need for a balanced glucose metabolism¹² A study done by the Department of Food Science and Human Nutrition at Michigan State University looked at diet quality and risk factors for cardiovascular disease in U. S. adults. This study went on to report that "the highest quintile of carbohydrate intake (>57.5% in men and >59.1% in women) was associated with higher concentration of serum triglyceride and lower HDL-cholesterol it was predicted that the more insulin-resistant an individual, the greater would be the negative metabolic effects of high-carbohydrate, low-fat diets¹³.

Some other studies also have evidence of –sugar-inducedhypertension¹⁴ suppression of neuronal survival signals by hyperglycemia resulting in transient forebrainischemia(stroke)¹⁵ development of kidney stones from sucrose intake. N. J. Blacklock, "Sucrose and idiopathic renal stone¹⁶ increased risk factors for lung

cancer due to high dietary sugars¹⁷ increased susceptibility to neurotoxins with excessive dietary intake of sugars¹⁸ These symptoms primarily define kapha type disorders. These findings therefore support the understanding and wisdom of both the ancient and current acknowledged teachers of Ayurveda with regard to the physical body.

Amla rasa or sour taste: - Sour Taste is composed of Earth and Fire and is hot, light, and moist by nature. It is commonly found in citrus fruits (such as unripe mangoes, green grapes, lemon and limes), sour milk products (like yogurt, cheese, and sour cream), and fermented substances (including wine, vinegar, pickles, and soy sauce). Its qualities are liquid, light, heating and oily, and it has anabolic action. In moderation, sour foods are refreshing. They stimulate the appetite, improve the digestion, energize the body and nourish the heart. relieve thirst, maintains acidity, sharpens the senses, and helps extract minerals such as iron from food. It also nourishes all the vital tissues (*dhatu*s) except the reproductive tissues (the exception being yogurt, which nourishes all the tissues). In excess, this taste can cause hyperacidity, ulcers and perforations. Its fermenting action can be toxic to the blood and cause skin conditions like acne, dermatitis, eczema, psoriasis, boils and edema, as well as burning sensations in the throat, chest, heart, bladder and urinary tract¹⁹.

From the point of view of the *panchabhautika* (pentavalent) theory of the Matter, substances tasting *amla* or sour are constituted predominantly with *agni* and *prithivi*.

According to modern chemistry, substances tasting sour are acids- both mineral and vegetable, i.e. mineral and organic acids. All acids- organic and inorganic ionize in aqueous solution into an anion and cat ion, the latter invariably being the hydrogen. The greater the concentration of hydrogen ion in a pure solution, the more pronounced is its sour taste. In other words, strong acids are highly ionized i.e. most of their molecules have dissociated into ions. Weak acids, such as those of vegetable origin, on the other hand are not highly ionized and their solution therefore contains comparatively large number of molecules from which ions have not dissociated. Sour taste therefore, is generally proportional to the concentration of hydrogen ions. *Tejas* has been stated to occur in nature in several forms- i) *Sharira tejas* or the physical form of *tejas* which occurs in the form of solar energy. ii) *Indriya tejas* or the *tejas* present in the sensory organs, an example of which is the form of *tejas* present as a point in the black eye corresponding to the retinal pigment or visual purple i.e. *Alochaka pitta*. iii) *Vishaya tejas* or the *tejas* which occurs in the objects of the senses. This variety is of four kinds viz.

a) *Bhauma tejas* or the *tejas* of the earth, which may be illustrated with the examples of fire and the phosphorescence of the glow worm

b) *Divya tejas* or the *tejas* of the sky: Examples of this variety of *tejas* are the lightning, rays of the sun and of the other members of the solar system. This variety includes the electro-magnetic phenomenon in the space.

c) *Audarya tejas* occurs in the gastrointestinal secretions in which are responsible for the digestion of foods and drinks. This variety includes *kayagni* or *dhatvagni* also.

d) *Akaraja tejas* or *the tejas* present in metals and minerals dug from the mines or radio-active and electromegnetic substances. The last variety of *tejas* is important in the consideration of the constitution of substances which taste *amla* or sour. Amlarasa or sour taste is experienced when the agneya and apya fractions of substances, predominantly *parthiva* and agneya in constitution are dissociated during their *paka* in the mouth.

Excessive indulgence in *amla rasa* produces in coordination of the parts and functions of the body, leads to the formation of the cataract of the eye, causes vertigo, itching sensation all over the body, palour, erysipelas, anasarca, blood- boils, thirst and pyrexia

Body Components Derived From The Constituents Of Amla Rasa:-

Agni Mahabhuta

Form& Visual apparatus

Metabolic enzymes &metabolism

Body heat, sharpness

Prithivi Mahabhuta

Gandha&Gandhendriya(Olfactory apparatus)

Gaurava&Sthairya(Heaviness and Stability)

Murti(Structure of the body) Coldness,

Kesha and Asthi

In the fetus, as previously described, *Rupa*, *Chakshu indriya*, *pakti-metabolism*, light, heat of the body, metabolic enzymes are coming from *teja mahabhuta* and smell, *gandhendriya*, stability, heaviness, stiffness or structure of the body, hair and bones are derived from *prithivi mahabhuta*. *Amla rasa* is made by *teja and prithivi mahabhuta* so if a pregnant female will over indulge in sour taste the parts deriving from these *mahabhutas* will be affected and the fetus will be suffering from the diseases like *Raktapitta*, skin and eye disorders.

Lavana Rasa- Salty taste is composed of Fire and Water and is hot, heavy, and moist by nature. It is found in any salt (such as sea salt and rock salt), sea vegetables (like seaweed and kelp), and foods to which large amounts of salt are added (like nuts, chips, and pickles).

In moderation, Salty taste improves the flavor of food, stimulates salivation, improves digestion and absorption, lubricates tissues, liquefies mucous, maintains mineral balance, aids in the elimination of wastes, and calms the nerves. Due to its tendency to attract water, it also improves the radiance of the skin and promotes overall growth in the body²⁰.

Too much salt in the diet makes the blood viscous and thick, can cause hypertension and aggravates skin conditions. Heat sensations, fainting, wrinkling and baldness may be due to excess salt, as well as edema, water retention, ulcers, bleeding disorders, skin eruptions, hyperacidity and hypertension.

In the body, fluids and cells are found dissolved variety of salts, out of which the common salt or sodium chloride is the commonest. The other salts which play a vital role in the determination of the internal environment of the body are those of calcium, potassium and magnesium. The concentration of these salts in the body fluids and cells of the body are nearly of the same order as those of the sea water. This fact has lent support to the theory that the origin of the first forms of life and the protoplasm was in sea and the salts became an integral part of the protoplasm during the course of its evolution. According to this theory, with the evolution of the multicellular forms, the body fluids incorporated into the organism were simply the modified sea water taken from the immediate sea environment. The composition of the body fluids in land animals including man is only diluted sea water. A diminution of calcium ion concentration in cells or body fluids, results in increased irritability. A proper balance of sodium, calcium and potassium ions is indispensable for the normal action of the muscle cells of the heart. This can be explained by the fact that in a pure solution of sodium chloride, frog's heart soon stops beating in the state of relaxation. On the other hand the heart stops in a state of maintained contraction in a solution containing sodium and calcium and not potassium. Too much of potassium stops the heart in a state of relaxation. It is only when the ions of these three salts are present in proper concentration will the heart continue to work normally.

Salts are responsible for the osmotic exchanges which are constantly going on in the human body. The importance of salts in the preservation of the fluid balance of the body can hardly be exaggerated. The process of osmosis which is largely determined by salts is a great conservator of energy, of respiratory interchange and metabolism, these facts generally bear out the description of the properties, actions and abuses of substances which taste *saltish* as given by *Acharya Charaka* and *Vagbhata*. If used in excess, *saltish* taste i.e. substances possessing saltish taste provokes *pitta*. It promotes the increase of blood, causes thirst, coma, heat, lysis and dehydration of the muscle tissue. It exacerbates cutaneous affections- *kushtha* including *kshudra kushta* or obstinate skin lesions like excema, psoriasis, dermatitis, lupus, acne, scabies etc., augments toxic states; bursts oedematous swelling; causes the shedding of the teeth; impairs manliness and the functions of the sense organs; produces wrinkling of the skin, graying of the hair and baldness of the head. In addition he says excessive indulgence in it predisposes to haemorrhagic states, hyper-acidity, erysipelas, neuritis, scabies, alopecia²⁰

Lavana rasa is made up of *jala and teja* mahabhoota; the components of the body derived from them areas follows:

Jala Mahabhoota

Agni Mahabhoota

Taste & gustatory system	Form& Visual apparatus
Lymph,blood, semen,urine, fat	Metabolic enzymes &metabolism
Coldness, softness, unctuousness	Body heat, sharpness

If the expectant mother indulges in excessive use of *Lavana Rasa* then the form- appearance of the baby due to skin & its appendages disorders will be distorted. The child will suffer from from blood and metabolic diseases e.g. hypertension, bleeding diathesis etc. Hypertension in turn will lead to pre-maturity, IUGR and asphyxia of the foetus.

Katu Rasa

Pungent taste derives from the elements of Fire and Air and is hot, dry, and light. It is found in certain vegetables (such as chili peppers, ginger, garlic, and onions), and in spices (like black pepper, clove, and asafetida) and milder spices like cinnamon, basil, mint, and thyme also count as spicy. In small amounts, Pungent taste stimulates digestion, clears the sinuses, promotes sweating and detoxification, dispels gas, aids circulation, improves metabolism, and relieves muscle pain. Its qualities are light, drying and heating²⁰. In moderation, it improves digestion, absorption and elimination, stimulates circulation, breaks up clots, and kills parasites and germs. In excess, it may cause sexual debility, choking, fainting and fatigue. If it leads to a *pitta* aggravation, it can cause diarrhea, heartburn, nausea, peptic ulcers, colitis and skin conditions. If it provokes *vata*, it can cause tremors, insomnia and muscle pain.

Over indulgence in the substances tasting *Katurasa* leads to excessive thirst, the inhibition of the production of reproductive elements, causes asthenia, coma, constriction of organs of the body and pain in the back and waist due to inflammation and irritation of kidney. *Acharya Charaka* added that *Katu ras* if consumed in excess impairs manliness on account of the mind, causes asthenia, wasting of the body, fainting fits, suffocation, exhaustion, vertigo and burning sensation in throat. It also causes great heat in the body, diminishes strength and produces thirst.

Katu rasa is made up of *vayu* and *teja mahabhoota*; the components of the body derived from them are as follows:

<i>Vayu Mahabhoota</i>	<i>Agni Mahabhoota</i>
Skin & Proprioceptors	Form& Visual apparatus
Activities of the body	Metabolic enzymes &metabolism
Respiration	Body heat, sharpness
Formation/ transportation of Dhatus	

So the excess use of *Katu rasa* will effect the oxygenation of the body, formation of the new tissues, diminished sensory functions, metabolic disturbances, etc. Thus a weak, emaciated and infertile offspring will be born of mother who consumes *Katu rasa* in excess during pregnancy.

From facts available by modern science relating to the properties of substances, such as the pungent spices act by irritation and cause mucuous flow, sneezing and lacrimation. The sensation this taste evokes which is

experienced as acidity, has been shown to be really the sensation of irritation due to the stimulation of the pain and heat receptors in the tongue.

Tikta Rasa

Bitter taste is composed of Air and Ether and is light, cooling, and dry by nature. It is found in green leafy vegetables (such as spinach, kale, and green cabbage), other vegetables (including zucchini and eggplant), herbs and spices (like turmeric, fenugreek, and dandelion root, aloe vera), coffee, tea, and certain fruits (such as grapefruits, olives, and bitter melon). Bitter taste is a powerful detoxifying agent, and has antibiotic, anti-parasitic, and antiseptic qualities. It is also helpful in reducing weight, water retention, skin rashes, fever, burning sensations and nausea. Its qualities are dry and light. It promotes the flavor of all tastes, is antitoxic and kills germs. Bitter helps to relieve burning sensations, itching, fainting and obstinate skin disorders. It reduces fever and stimulates firmness of skin and muscles. In small doses it can relieve intestinal gas and work as a digestive tonic. Because of its drying quality, excess bitter taste may deplete plasma, blood, muscles, fat, bone marrow and semen, which may result in sexual debility that's why though possessed of valuable properties, excessive use of substances possessing *tikta rasa* or bitter taste, leads to the drying up of the *rasa* or tissue fluids, blood tissue, muscle tissue, adipose tissue, *asthi* or bone tissue, *majja* or marrow (yellow or red) and *shukra* or the reproductive elements, on account of its *ruksha* or rough, *khara* or dry and *vishada* or transparent qualities it renders the srotas or channels, *khara* or roughness and predisposes to asthenia and wasting, causes the loss of cheerfulness of the mind, delusion fainting, dryness of the mouth and different kind of *vata* disturbances²⁰.

Body components derived from the constituents of *Tikta Rasa*.

<i>Akasha Mahabhutas</i>	<i>Vayu Mahabhutas</i>	
Shabda (Sound)	<i>Sparsha & Sparshanendriya</i> (Skin & Proprioceptors)	
<i>Shrotrendriya</i>	<i>Chesta/Pratispandana</i> (Activities of the body)	
<i>Laghava</i> (Lightness)	<i>Uchchhvasa & Nichhvasa</i> (Respiration)	<i>Saukshmya</i> (minuteness)
	<i>Dhatuvyuhana</i> (Formation/ transportation of Dhatus)	

Viveka (division)

Srotasas (channels)

Chhidras (orifices)

Thus the mother who over indulges in *tikta rasa* during pregnancy will lead to a child suffering from *Shosha* (emaciation) due to *laghu and sukshma guna* excess, Oedema due to obstruction of the channels by excessive *vayu*, weak child due to improper formation and transportation of *dhatu*s.

Kashaya Rasa

Astringent taste results from the combination of Air and Earth and is dry, cooling, and heavy by nature. It is the least common of all the 6 Tastes and can be found in legumes (such as beans and lentils), fruits (including cranberries, pomegranates, pears, and dried fruit), vegetables (such as, broccoli, cauliflower, asparagus and turnip), grains (such as rye, buckwheat and quinoa), spices and herbs (including turmeric and marjoram), coffee, and tea. Astringent taste is not as cold as Bitter taste but has a greater cooling effect on the body than Sweet taste.

Astringent taste is classified more in relation to its effect on the tongue than its actual taste. It creates a puckering sensation in the mouth (such as cranberries) or a dry, chalky feeling (such as many beans). Foods like broccoli or cauliflower have a mildly Astringent taste that is less detectable. Dry foods such as crackers and chips, most raw vegetables, and the skins of fruits also have Astringent qualities. Astringent foods—such as cranberries, walnuts, turmeric, pomegranate, rhubarb, and most unripe fruits Unripe bananas, pomegranate, chickpeas, yellow split peas, okra, turmeric, alfalfa sprouts and alumroot are examples of the astringent taste. Its qualities are cooling, drying and heavy. In moderation, it aids in healing ulcers and promotes clotting. In excess, it may cause constipation, distension, heart spasm and stagnant circulation. It may also lead to depletion of sperm and affect the sexual drive, and can give rise to a variety of neuromuscular disorders²⁰.

Substances possessing *Kashaya rasa* or astringent taste are composed of compound which are essentially *prithvi and vayu* in constitution. Excessive use of Substances possessing *Kashaya rasa* or astringent taste produces distension of abdomen, provokes the disturbances of vata, causes pericardial pain, thirst, asthenia, impotency, obstruction or obliteration of the channels of circulation of biological fluids and the retention of faeces, impedes speech, affects heart, produces cyanosis, it is slowly digested.

The properties described in Ayurveda are supported by facts of modern pharmacology, according to which astringent drugs having property of contraction or shrinkage of the tissues and diminished exudation or secretion. In the intestine their effects are antagonistic to purgatives. All astringents are local haemostatics.

Body components derived from constituents of *Kashaya Rasa*

Prithvi Mahabhuta

Gandha & Gandhendriya(Olfactory apparatus)

Gaurava & Sthairya(Heaviness and Stability)

Murti(Structure of the body)

Kesha and Asthi(Hair& bones)

Vayu Mahabhuta

Sparsha and Sparshanendriya(Skin)

Chesta (Activity of the body)

DhatuVyuhana(Formation Transportation of dhatus)

Uchchhavas-Prachchhvas(Respiration)

The child born of a mother who indulges in excessive use of *Kashaya rasa* will be of *Shyava varna*(dark complexion) ,the *grahi* action of *vayu and prithvi* in combination will effect the intestinal motility leading to *Anaha and Udavarta*.

Taste and specific food consumption change across the course of pregnancy. These changes in food consumption if leads to single particular Rasa(Taste) may result in to harm to the progeny. So to have a healthy progeny, thoughtful planning of diet taking into consideration of the facts of rasa is desired.

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