Saṃsarjana krama: the graduated diet in *Āyurveda*

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5.4 Āma: undigested food

The status of agni ('digestion') is the focal point for diagnosis and treatment in $\bar{A}yurveda$. Its deficiency or impairment is the cause for the creation of $\bar{a}ma$, which literally interpreted, means 'undigested food stuff.' In a broader context, however, $\bar{a}ma$ is the impairment of one's ability to derive nourishment from life, be it physical, emotional, mental, or spiritual. A correctly functioning agni confers a harmonious benefit to the whole organism, with proper discrimination of the body, mind, and senses.

As the by-product of poor digestion $\bar{a}ma$ is opposite in nature to agni, displaying qualities such guru ('heavy'), $\dot{s}ita$ ('cold'), snigdha ('greasy'), picchila ('slimy'), and manda ('slow'). All qualities of $\bar{a}ma$ are essentially identical to kapha. The difference between $\bar{a}ma$ and kapha, however, is that instead of acting as a counterbalance to the activities of $v\bar{a}ta$, $\bar{a}ma$ accumulates in the $srot\bar{a}msi$ ('channels') and blocks the flow of $v\bar{a}ta$. The labile nature of $v\bar{a}ta$ causes it to move backwards when encountering this obstruction, reversing its flow in the body and thereby producing dysregulation and disease (see $vim\bar{a}rga$ gamana srotodusti, p. **Error! Bookmark not defined.**).

When agni is weak āma is formed instead of ojas, and as a result, ojas gradually becomes deficient. And, because ojas feeds agni, a deficiency of ojas results in a further diminution of agni. In the dichotomy between ojas and agni, āma represents an entropic tendency in the dhātu cycle. It is the accumulation of āma over many years that eventually robs ojas and agni of much of their power, facilitating the processes of degeneration, decay and death.

Although the qualities of $\bar{a}ma$ are similar to kapha, $\bar{a}ma$ can associate with any of the $doṣ\bar{a}h$. In such a state a doṣa is said to be $s\bar{a}ma$, or 'with $\bar{a}ma$.' In the absence of $\bar{a}ma$ a doṣa is said to be $nir\bar{a}ma$, or 'without $\bar{a}ma$.' The first treatment of any condition in $\bar{A}yurveda$ is the elimination of $\bar{a}ma$ and enhancement of agni (see p. **Error! Bookmark not defined.**). If the condition persists beyond the use of these measures, a specific treatment is administered to the vitiated doṣa(s).

Āma can be identified by a clear set of signs and symptoms, described by Vāgbhaṭa:

srotorodhabalabhramśagauravānilamūḍhatāḥ ālasyāpaktiniṣṭhīvamalasaṅgāruciklamāḥ

- Astañga Hrdaya, Sūtrasthāna, 13:23-24a

When translated, this description provides very clear guidelines that aid in the identification of *āma*. These include:

- Srotorodha: blockage of channels, poor circulation
- · Bala-bhramśa: loss of strength
- Gaurav: feeling of heaviness
- Anila-muh-tad: aggravation of vāta, e.g. breathlessness, tingling and numbness, mental confusion and restlessness
- Ālasya: lassitude
- · Apakti: indigestion
- Nisthīva: mucus congestion, spitting
- Malasangā: impaired detoxification and elimination
- Aruci: loss of appetite
- Klama: easily exhausted, poor stamina

8.0 The nature of diet

According to Caraka, food is the primary factor in the growth and maintenance of the body, and thus when the 'diet' $(\bar{a}h\bar{a}ra)$ is 'unwholesome' (ahita), it brings about the cause of disease $(S\bar{u}\ 25:31)$. It is thus of the utmost importance to ensure that the diet is 'wholesome' $(hita\ \bar{a}h\bar{a}ra)$. There are eight basic elements of a wholesome diet:

- 1. Deha (climate)
- 2. *Kāla* (time and season)
- 3. *Rāśi* (quantity)
- 4. *Prakṛti* (quality)
- 5. Karana (preparation)
- 6. Samyoga (combinations)
- 7. Upayoga (consumption)
- 8. *Upayukta* (recipient)

9.6 Ahita āhāra: unwholesome diet

The fifth and final cause of disease is *ahita āhāra*, or unwholesome (*ahita*) diet (*āhāra*). When the diet is improper the *agni* is weakened, promoting the production and accumulation of *āma*, which in turn, associates with the *doṣāḥ* to promote their increase and vitiation. In the 25th chapter of the *Sūtrasthāna*, *Caraka* recounts a debate that occurred thousands of years ago, between the illustrious sages that had gathered in the Himalayas to resolve the question of the cause of disease. Each of the assembled sages arises to speak, some suggesting that the ultimate cause of disease is related to factors such as the mind and emotions, heredity, *karma*, the Gods etc., when finally the question arrives at the feet of Ātreya Punarvasu. When Vāmaka, the King of Kāśī asks Ātreya, he replies:

hitāhāropayoga eka eva puruṣavṛddhikaro bhavati ahitāhāropayogaḥ punarvyādhinimittamiti

"Only the use of wholesome food promotes the growth of a person, whereas food which is unwholesome is the cause of disease."

- Caraka samhitā, Sūtrasthāna 25:31

In essence what Ātreya is saying is that the very same factors that are responsible for the nourishment and maintenance of the body are also the cause of disease. Thus in understanding the health of the body, look for the potential of disease in that which brings about life. A wholesome diet (hita āhāra) maintains and protects the body, whereas an unwholesome diet (ahita āhāra) brings about its destruction.

14.2 Samsarjana krama: the graduated diet

Saṃsarjana krama is a key aspect of treatment in $\bar{A}yurveda$, used not only to restore digestion after pañca karma, but especially in the treatment of $\bar{a}ma$ (p. **Error! Bookmark not defined.**) and diseases such as *jvara* ('fever') (p. **Error! Bookmark not defined.**). Following the injunction in $\bar{A}yurveda$ to only eat twice a day, meals during the application of saṃsarjana krama are usually given twice: once at midday, and then once again in the early evening. The components of the graduated diet are as follows:

- Manda
- Peya
- Yavāqū
- Vilepī
- Odana

- Akṛta yūṣa
- Kṛta yūṣa
- Māṃsa rasa

The first component of the samsarjana krama is manda, which is the liquid portion of boiled rice, prepared by cooking one part rice in 14 parts water, straining out any grains, and adding a little saindhava. Manda is a milky-colored starchy liquid, and is the easiest of all the foods to digest, usually given once at the outset of the regimen. Following manda, the next meal is a watery rice soup called peya, prepared by cooking one part rice in eight parts water, with a little saindhava. Unlike maṇḍa, peya contains a few grains of rice, but is still mostly liquid. The next stage of the graduated diet is yavāgū, prepared by cooking one part rice in six parts water, yielding a preparation that is a little thicker and contains more grains of rice than peva. Following vavāgū is vilepī, a thick rice soup that is a little stickier in quality, prepared by cooking one part rice in four parts water, with a little saindhava. The next stage of the graduated diet is odana, prepared by cooking one part rice in two parts water, with a little saindhava. During this stage of the graduated diet odana is typically eaten with yūṣa, or bean soup (i.e. dhal), prepared with legumes such as mudga or kulatthā, one part cooked in 14 parts water. Yūṣa is of two types: the first type prepared without fat, sour or salty flavors, called akṛta yūṣa; and the second type, which contains fats such as ghrta, as well as sour and salty flavors, called krta yūsa. The last phase of the graduated diet is odana eaten with māmsa rasa, or meat soup, prepared by braising pieces of mutton or goat meat in water, saindhava, and spices. Beyond rice other cereals can be used as well: barley in kapha conditions such as mucus and cough, and oats for both *vāta* and *pitta* conditions such as mucosal dryness and irritation. Likewise, other types of meat such as poultry can be used instead of mutton and goat in māmsa rasa, depending on the needs of the patient and the discretion of the practitioner.

How the different aspects of the graduated diet are implemented depends on numerous factors, including whether it is being used as āmapacana, in the treatment of diseases such as fever, or whether it is employed after pañca karma. If it is being used for āmapacana, the regimen can be simplified, such as eating odana and kṛta yūṣa over a period of several weeks. Likewise, if used in fever, aspects of the graduated diet such as yavāgū are prepared with easily digestible cereals such as lāja ('puffed rice') and specific herbal decoctions to medicate the gruel (see p. Error! Bookmark not defined.). As a 'post-operative' (pascāta karma) procedure following pañca karma, the implementation of the graduated diet depends upon whether the treatment given was mild (avarā śudhi), moderate (madhyama śudhi), or strong (pravara śudhi):

- for avarā śudhi, saṃsarjana krama is given for three days;
- for madhyama śudhi, saṃsarjana krama is given for five days; and
- for pravara śudhi, samsarjana krama is given for seven days.

Following Arundatta in his commentary on the Aṣṭāñga Hṛdaya, the following table demonstrates the application of the graduated diet over a period of three, five, and seven days, for avarā śudhi, madhyama śudhi, and pravara śudhi, respectively:

Strength of Therapy	Peya	Vilepī	Akṛta yūṣa	Kṛta yūṣa	Māṃsa
					rasa
Avarā śudhi	Day 1	Day 1	Day 2	Day 2	Day 3
(mild therapy)	lunch	dinner	lunch	dinner	lunch
					Day 3
					dinner
Madhyama śudhi	Day 1	Day 2	Day 3	Day 4	Day 5
(moderate therapy)	lunch	lunch	lunch	lunch	lunch
	Day 1	Day 2	Day 3	Day 4	Day 5
	dinner	dinner	dinner	dinner	dinner
Pravara śudhi	Day 1	Day 2	Day 4	Day 5	Day 7
(strong therapy)	lunch	dinner	lunch	dinner	lunch
	Day 1	Day 3	Day 4	Day 6	Day 7
	dinner	lunch	dinner	lunch	dinner
	Day 2	Day 3	Day 5	Day 6	
	lunch	dinner	lunch	dinner	

Regimen of samsarjana krama

Note that Vāgbhaṭa does not include every component of the graduated diet in this regimen, omitting <code>manḍa</code> and <code>yavāgū</code>. Once again, the choice of elements to include in the graduated diet is based upon the needs of the patient and the discretion of the practitioner. For example, the first meal of <code>peya</code> could be substituted with <code>manḍa</code> if required, and <code>yavāgū</code> could be used instead of <code>vilepī</code>. Similarly, if the patient is vegetarian, <code>krta yūṣa</code> would be used instead of <code>māṃsa rasa</code>. Once the patient has completed the prescribed regimen of the <code>saṃsarjana krama</code>, they can return to an otherwise wholesome diet (see p. 2), or in <code>pañca karma</code>, continue on with the next phase of treatment.

Samsarjana krama (graduated diet): patient support

Important notes!

- 1. Doses are based on a 150 lb (68 kg) adult, and must be adjusted as necessary. Diabetics, patients taking pharmaceuticals, and anyone on a physician-supervised dietary regimen are ineligible candidates for the graduated diet, although individually tailored versions of the graduated diet may be recommended.
- 2. Please realize that if you are following this diet you are consuming very little food energy, and cannot expect to function normally. You must rest while you undertake this therapy, spending much of your time sitting or lying down, doing light yoga, walking slowly, etc. Your regular regimen of work and exercise, however, cannot be implemented during this time.

3. If your appetite returns very strong and consistently within a short period of time, skip ahead to day 7-14, and continue with the regimen. A strong appetite indicates a properly functioning agni, but does not necessarily mean the ama has entirely dissipated, which should be confirmed through examination other signs, e.g. strength, energy, mental status, mucus congestion, pain, etc. Further treatment may also need to be given to balance the doshas.

Ingredients and recipes

- Powha: flaked rice, available in white (Indian) and red (Kerala/Sri Lanka) varieties. Pick out any contaminants, rinse in cool water quickly, and drain. Add the prescribed amount to a pot, the required amount of water, and cook at low-medium heat until it is a mostly homogenous porridge. There are two recipes that can be prepared with powha:
 - Manda: one oz (30 g) powha (1-2 handfuls), prepared in fourteen times water (14 oz, 420 mL)
 - Peya: two oz (60 g) powha (2-4 handfuls), prepared in eight times water (14 oz, 420 mL)
- Basmati rice, or if desired Kerala/Sri Lankan red rice, which is a partially milled rice that cooks in roughly the same amount of time as white basmati. The red rice however should be soaked overnight. Otherwise, remove any objects, rinse in cool water, drain, and cook as prescribed. Different types of preparations that can be made include:
 - Vilepi: prepared at a 1:4, ½ cup rice in 2 cups water
 - Odana: prepared at a 1:2, 1 cup rice in 2 cups water
- Yusa, or split, washed mung dahl. Soak one handful (~1.5 oz, 45 g) in water overnight, drain well, and then lightly roast in a dry pan for few minutes, only to parch, not to burn the bean. Add 14 times (21 oz, 620 mL) the volume of water, 2-3 slices of ginger root, and cook until it is a homogenous porridge yielding about 1½ cups, or 350-400 mL. Stir periodically during cooking, to prevent burning.
- Pink salt; also know as Himalayan pink salt or sendha namak. Black salt, or kala namak, has more sulfur and is especially good for digestion.
- Hingwastak (churna): A powdered (churna) spice mixture, easy to get at most Indian grocery stores. Contains hing (asafoetida), a stinky-smelling herb like garlic that is good for digestion, colic, and parasites. Hingwastak also contains pepper, ginger, nigella, ajwain and other spicy herbs. Only use a tiny pinch in the beginning, and see how it feels. Increase up to ½ tsp, and if well tolerated, up to a maximum of 1 tsp.

- Ginger tea: use 4-6 slices of the root per every 2 cups (500 mL). Bring to a boil, and simmer for 10-20 minutes at low heat. Grate the root or add more ginger to make it stronger. Strain, drink warm, but not too hot. Add ½ tsp licorice powder to steep for burning sensations or gastric irritation. Add several slices or the grated root of fresh turmeric for joint pain and general inflammation.
- Pickles, live culture e.g. fermented carrot, radish, or cabbage, properly soured, i.e. not a fresh ferment. Let age for one month on the counter before refrigerating. Recipes start on p. 159, Food As Medicine.
- Mamsa rasa ('meat juice'): In a pressure cooker, fry 2-3 lbs of goat stew meat in with fresh ginger, onion and turmeric. Add 12 cups of water, a pinch of pink salt. Secure lid and pressurize, reducing heat to a medium-simmer, and cook for 75 minutes. When done, strain soup from meat. Refrigerate to scoop off the congealed fat. For this process, it is best to prepare in advance, and store in four separate containers in freezer for separate meals. The meat can be frozen and added to other stocks to make stew at a later date.
- Bone soup: prepare in advance, as per mamsa rasa above. See recipe in Food As Medicine, p. 147.
- Steamed root/starchy vegetables, e.g. carrot, rutabaga, winter squash, sweet potato, daikon, parsnip. Cook until super soft, but not overcooked (i.e. color loss). Onions can be steamed as well, but should have no pungency. Good for constipation, but too much will tend to cause loose motions.
- Stir-fried leafy green vegetables. Baby or tender greens are best, e.g. bok choy, spring kale, nettle, methi, etc. Dice into ½ inch pieces, equal to 2-3 cups. Add 1-2 tsp of olive oil or ghee to a fry pan, and at medium heat, add 2 tsp each fresh grated ginger and turmeric, and ½ tsp pink salt. Let the spices cook for a half a minute, then add veggies. Cook until tender but still brilliant green.
- Stew. Prepared in a similar manner as mamsa rasa, but can also be prepared with the addition of root vegetables mentioned earlier (e.g. onion, garlic, carrot, sweet potato, squash etc.). Traditional herbs such as Indian, Mediterranean, Romanian, French etc. can be used to flavor the stew, p. 143, Food As Medicine.

Meals	Breakfast (10am)	Mid-day (1pm)	Dinner (5pm)
Day One	Manda	ginger tea	• Peya
Day Two	Vilepi, 1 cup	ginger tea	Odana, 1 cup

	pink salt, pinch		pink salt, pinch
Day	• Odana, 1-1½ cups	ginger tea	• Odana, 1-1½ cups
Three	Yusa, 1-2 cups		Yusa, 1-2 cups
	Hingwastak, pinch		Hingwastak, pinch
Day Four	Odana, 1-1½ cups	 ginger tea 	Odana, 1-1½ cups
	Yusa, 1-2 cups		Yusa, 1-2 cups
	chopped Cilantro, salt		Hingwastak, pinch
	Hingwastak, pinch		 Live culture vegetables, ½ cup
Day Five	• Odana, 1-1½ cups	 ginger tea 	• Odana, 1-1½ cups
	Mamsa rasa, 1-2 cups		Mamsa rasa, 1-2 cups
	 Root vegetables, ½-1 cup 		 Root vegetables, ½-1 cup
	chopped Cilantro, salt		 Live culture vegetables, ½ cup
	Hingwastak: 1/4-1/2 tsp		 Hingwastak: ¼-½ tsp
Day Six	Odana, 1-1½ cups	Bone broth, with	Odana, 1-1½ cups
	Stew, 2 cups	garden herbs	Stew, 2 cups
	Lightly steamed or stir-fried	(chives,	Lightly steamed or stir-fried leafy
	leafy greens, 1 cup	rosemary,	greens, 1 cup
	Hingwastak: 1/4-1/2 tsp	oregano, etc)	 Live culture vegetables, ½ cup
			• Hingwastak: 1/4-1/2 tsp

Days 7-14

Follow a similar meal regimen, substituting goat/lamb in the stew with other types of meat. Portion sizes may increase proportional to an increase in appetite from regular exercise, which can now be introduced. Continue with the rice, but no other cereal during this period.

Days 15-30

Slowly introduce heartier foods. Breakfast can shift to lower carbohydrate to stabilize blood sugar and nervous activity, such as eggs, meat, fish, but at the end of the day when digestive activity is declining, dinners should be simple stews. During this period you can experiment with different cereals, such as quinoa, amaranth, buckwheat, short grain brown rice, and wild rice, but for whole grains always make sure to ferment before cooking to reduce antinutrient factors that inhibit digestion (see Food As Medicine, p. 124).