



Role Of Ayurveda In Improving Gut Transit Time

Dr. Lekshmy M L, Assistant professor, Department of Samhita and Siddhanata,

Dr.Pooja Rajendran, Assistant professor, Department of Shalya tantra

Prasanna College of Ayurveda and Hospital, Laila Beltangady

INTRODUCTION

Gut transit time is referred as the time taken for a particular meal or food to travel from the mouth, to the digestive tract till its elimination through all bowel movements. For a healthy person bowel transit time is 8 to 14 hours. People should have two to three bowel movements per day. Transit time varies greatly from person to person due to age, dietary habits, climate, exercise habits, immobility, use of medicines and so on. Due to the involvement of different factors, an exact bowel transit times for the general public cannot be determined. Modulation of gastrointestinal transit time is having great importance in maintaining the health. For a healthy transit time fiber-rich diets, good physical fitness, and avoiding use of medications with constipating side effects, is recommended¹.

In Ayurvedic view digestion and transit time can be correlated with concept of Jataragni Agni and its types. Ayurveda is emphasizing the importance of the digestive fire, as the foundation of our overall health and well-being, influencing everything from the nourishment of our tissues to the strength of our immune system. Jatharagni is located in the stomach and small intestine. Ayurveda identifies four basic varieties of Jatharagni: Mandagni (low digestive fire), Tikshnagni (high digestive fire), Vishamagni (irregular digestive fire), and Samagni (balanced digestive fire). Maintaining Sama Agni and balancing the other three Agni is the key to preventing disease and achieving a state of balanced health².

Among the four types of Agnis persons with samagni will be having a normal Gut transit time. The gut transit time in persons with tikshnagni will be less than the normal whereas in mandagni, transit time will be more. The transit time in person with vishamagni will be irregular, The strength of Agni, or our digestive fire, plays a crucial role in maintaining a healthy gut microbiome, removing Ama (toxins) and preventing all diseases. By understanding the link between Agni, the gut microbiome, and the accumulation of Ama, we can take preventive steps to support our digestive fire, thereby maintain gut transit time and prevent the buildup of toxins by treating the root cause before it leads to disease. By identifying the type of Agni in each person through his constitution and by following the methods to balance those Agnis will help in balancing and improving transit time. This paper tries to highlight the role of Ayurveda in maintaining the GTT by adopting the measures to improve jatargni.

MATERIALS AND METHODS

Literature searches were carried out to find out in various Samhitas, available commentaries, published articles and databases

RESULTS AND DISCUSSION

GUT TRANSIT TIME

For a healthy person bowel transit time is 8 to 14 hours. People should have two to three bowel movements per day. Table 1³ shows the normal transit time in each part of digestive system

Table 1:

Organs	Transit time
Mouth	1 minute
Eosophagus	4-8 seconds
Stomach	2-4 hrs
Small intestine	5 hours
Large intestine	21 hrs

Transit time varies greatly from person to person due to age, dietary habits, climate, exercise habits, immobility, use of medicines and so on. Due to the involvement of different factors, an exact bowel transit times for the general public cannot be determined. Table 2⁴ shows transit time for different food items.

Table 2:

Food items	Transit time
Juice	15-30 Minutes
Fruit	30-60 Minutes
Melons	30-60 Minutes
Sprouts	1 Hour
Wheatgrass Juice	60-90 Minutes
Most Vegetables	1-2 Hours

Modulation of gastrointestinal transit time is having great importance in maintaining the health. Some of the ways to improve bowel transit times are listed here which can act as vital in maintaining health⁵. They include

1. Use of daily fiber intake upto 25-30 grams.
2. Daily Exercise
3. Drink purified water daily nearly in ounces equal to half of our body weight..
4. Don't suppress the urge to defecate.
5. Avoid regular use of chemical laxatives. They reduce colon muscle tone and are counterproductive in the long run.
6. Eat meals in regular times.
7. Stop eating before you are full, because your brain signals the feeling of fullness 10 minutes after you are actually full.

A good bowel transit time is an important part of a healthy person's lifestyle. Slow times increase the risk of anal fissures, hemorrhoids, constipation, upper abdomen bloating, gas, and abdominal discomfort or pain. A healthy transit time reduces bloating, gas, indigestion, fullness, constipation and abdominal pain. It can help reduce anorectal disorders as well. Many tests can be performed in home as per our comfort time. Dietary modifications and exercise can improve bowel transit without major life altering changes. If the difficulties in improving bowel transit time is not undertaken if its altered, there is a high chance of developing serious diseases, including gastro intestinal disorders and anorectal diseases.

CONCEPT OF JATARAGNI

Agni is the force within each cell, each tissue, and every system within the body. In Ayurveda 3 types of Agni is there.

1. Jatharagni: Digestive fire located in the stomach and small intestine, helps in the digestion of food.
2. Bhutagni: Digestive fire located in the tissues, helps in the transformation of nutrients into usable energy.
3. Dhatvagni: Digestive fire located in the cells, helps in maintaining cellular metabolism and functions.

Among the 3 types of Agnis, Jatharagni is responsible for digesting our food and converting it into nutrients, to be distributed to our tissues and cells. If the Agni is in equilibrium, it helps in maintaining a healthy gut microbiome as well as digestion, which is vital for health by both modern science and Ayurveda. Along with this a strong Agni promotes assimilation of nutrients and ensures efficient elimination of waste thus minimizes the production of toxins (Ama) and prevents the growth of harmful bacteria. As per Ayurveda the root causes of all imbalances and diseases is Jataragni. If its in the Balanced state, it will ensure Agni a long, healthy life whereas impaired Agni surely will lead to imbalance, disease, and discontent.

There are four types of Jataragni on the basis of constitution (prakriti) of individuals⁶

1. Mandagni (low digestive fire)- in Kapha prakriti person,
2. Tikshnagni (high digestive fire) – in Pitta prakriti person,
3. Vishmagagni (irregular digestive fire) – in Vata prakriti person, and
4. Samagni (balanced digestive fire)- in samdosha person.

Sama Agni: balanced Digestive Fire

In the state of Sama Agni, or balanced digestive fire, regular bowel movements, a healthy appetite, lack of bloating or gas, and consistent energy throughout the day. Those who are having a balanced Agni can generally digest a reasonable quantity of any food in any season without discomfort, and they will be able to tolerate all seasonal changes without any serious illnesses. Sama Agni helps to supports a strong immune system, clear skin, balanced energy levels, and a stable mood, clear thinking, sound sleep, and a general sense of physical and mental harmony. Samagni should be maintained to prevent disease and maintaining health⁷.

Vishama Agni: Irregular Digestion

Vishama Agni, or irregular digestive fire, is primarily seen in Vata predominant persons. This type of Agni fluctuates, leading to inconsistent digestion and absorption of nutrients. The samagni person may experience irregular appetite, bloating, gas, constipation, alternating diarrhoea, and a sense of unease or restlessness. Emotional features like anxiety, fear, insomnia, and weakness of the body can be observed. It can lead to the formation of Ama.

Vishama Agni, should be balanced by following methods to pacify Vata dosha by following regular routines, consuming warm and nourishing foods, and avoiding cold, dry, and raw foods, regular meals, warm oil massages using a Vatahara oil and activities like yoga and meditation can help stabilize Agni⁸. In severe vata vitiated conditions Vasthi can be done with vatahara drugs after proper poorvakarmas.

Tikshna Agni: Intense Digestion .

Tikshna Agni, or intense digestive fire, is primarily linked to an imbalance in Pitta dosha. This type of Agni is overly strong, leading to rapid digestion that can burn through food too quickly, often resulting in insufficient nutrient absorption. Signs and symptoms of Tikshna Agni include excessive hunger, acid reflux, heartburn, loose stools, hyperacidity, acid indigestion, gastritis, and acidic saliva. The lips, throat, and palate may feel excessively dry after eating and the tongue can develop red margins and tenderness. Individuals with Tikshna Agni may also experience inflammation, skin rashes, and a feeling of heat in the body. Emotionally it triggers a tendency towards hate, envy, irritability, aggressiveness or anger, a strong desire to be in control, and harsh judgment of everyone and everything. When Ama forms because of Tikshna Agni, it tends to cause a yellow or greenish coating on the central part of the tongue. Tikshnagni can be balanced by following Pitta upakramas which include use of kashaya tikta madhura aharas and seeta rooksha guru viharas , externally and internally and through mild virechana in severe conditions⁹.

Manda Agni: Weak digestion

Mandagni is associated with an imbalance in Kapha dosha. In this condition digestion will be sluggish and slow which results in incomplete metabolism of food, lack of appetite, heaviness after eating, bloating, lethargy, and weight gain and may result in the formation of ama. Mandagni can be balanced by following rooksha laghu ushna viharas and katu tikta kashaya ahara dravyas, and by following other kapha upakramas like daily exercises, and udvarthana therapy. If in the combination of doshavasta ,its better to maintain the balance of Agni by considering the primary dosha involved¹⁰.

CONCLUSION

Since the transit time is totally depending upon the state of Agni in a person, by balancing the Agni transit time also can be improved. A balanced Agni along with proper Gut transit time is essential for overall health. By adopting to maintain the balance of Agni there by balancing Gut transit time prevents from metabolic disorders as well as emotional disorders and hormonal imbalance because gut is related to brain through gut brain endocrine axis. .

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