RASAYANA: THE REJUVENATING REMEDY FOR HEALTH

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ABSTRACT
Gradual increase of Population in urban area may leads to environmental pollution and microbial infection in air and water increases expontially. Most of the persons in the population are in trap of mental stress and depression due to struggle in the life and overload of work. So both of these conditions are responsible for so many disease and ill-health, and one more important thing is that due to increase negligence and uninhabited use of processed food, the ill effects on health are compound manifold when coupled with unhealthy lifestyle and food habits. So there is a need of taking dietary supplementary food or nutraceutical. The main aim of Ayurveda has been working upon a twofold process i.e., to maintain the health of a healthy individual and to treat the one with the disease. Thus by laying emphasis on the first aspect and combining it with the knowledge of the role of phytochemical as, one can gradually deduce an effective module for living healthy and line of treatment of metabolic and geriatric disorders. The phytochemical are the essential nutrients, which are naturally contained in plants and are required for normal physiological functions. The Rasayana not only boost general health but also provide the necessary raw materials to strengthen the defense mechanism of the body.

KEYWORDS: Phytochemical, Antioxidant, Rasayana, Rejuvenation, Phytotoxins,

INTRODUCTION
Living healthier is the prime objective of Ayurveda and secondary is to get rid of many disease if occur. Healthier one is living longer and able to achieve Purusartha-catustaya (main four aim of human). Medical and health services of different counties of the globe are continuously in search of safe, effective, economical and easily available to everyone. The traditional health care system of various old civilizations serving the human kinds from ages. Their value is still extensively accepted and their area becomes widen due to immerging of new disease. Main reason of these problems are arises due to increasing stress, irregular eating habits, and excessive travel, indiscriminate use of antibiotics, high alcohol consumption, high intake of packaged and processed food, and pollution are all factors that contribute to this alarming trend. Natural, fresh, properly processed, nutrients rich and hygienic food are proportional to health. Enjoying every moments of life and always remain mentally active is also imparting good life. Always keeping ourselves physically active is fundamental need of body. According to Dr. S. Oklund that Health status and quality of life depend on multiple measures. Successful or healthy aging depends on a combination of lifestyles involving persistence of physical and mental functioning, avoidance of disease, and enjoyment of family and community support. In Ayurveda different kinds of Rasayanas are mentioned, various types of Rasayana Dravya, Achar Rasayana, and regimen are mentioned to maintain good health. Rasayana is a word taken from the Sanskrit language, which means: Path (Aayana) of the essence (Rasa). It is a science of increasing life expectancy, as per early Ayurvedic medicine.

Materials and methods
Data and evidences were collected from secondary sources which include books, articles, reference materials, Wikipedia etc.

Rasayana: Rasayana is the seventh branch of the eight branches of Ayurveda.[1] Definition of Rasayana was mentioned by Acharrya Charka as, “The Rasayana drugs and formulations provides longevity, memory, intelligence, freedom from diseases, youthful age, excellence of luster, complexion and voice, optimum strength of physique and sense organs, respectability and brilliance.”[2]
Classification of Rasayana

On the basis of mode of use[3]
- Kutipraveshika - In door Regimen
- Vatapatika - Out door Regimen

On the basis of purpose of use[4]
- Kamaya Rasayana - Promoter of normal health
- Prana Kamaya - promoter of life vitality and longevity.
- Medha Kamaya - promoter of intellect.
- Sri Kamaya - promoter of complexion and luster.

Most of the Rasayana Dravya is use singly or in combination. Different Formulations of Rasayana like Curna, kalka, svarasa, Avaleha, Taila, Grta, Ksheer, Guggulu etc.

Phytochemicals

Phytochemicals are non-nutritive plant chemicals that have protective or disease preventive properties. They are considered non-essential nutrients, meaning that they are not required by the human body for sustaining life before few years ago. It is well-known that plant produces these chemicals to protect themselves but recent research demonstrate that they can also protect humans against diseases. There are more than thousands of known phytochemicals[5]. Phytochemicals with established roles in the body are classified as essential nutrients[6]. Phytochemical are required for normal physiological functions, so must be obtained from the diet in humans.[7]

Table 1: Types of Phytochemicals[8]

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Phytochemical</th>
<th>Sources</th>
<th>functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Carotenoids</td>
<td>Yellow, orange and red color of many fruits and vegetables, including red peppers, papayas, tomatoes &amp; watermelon.</td>
<td>Strong antioxidants improve eyesight reduced &amp; risk of many diseases</td>
</tr>
<tr>
<td>2</td>
<td>Flavonols</td>
<td>Apples, apricots, beans, cherry tomatoes, pears, onions, red grapes &amp; sweet cherries,</td>
<td>Reduce the risk of cardiovascular disease and lower blood pressure</td>
</tr>
<tr>
<td>3</td>
<td>Anthocyanins</td>
<td>Reds, blues, and purples found in fruits and vegetables like strawberries, raspberries, blackberries, cherries, eggplants, grapes, red cabbage, and red apples.</td>
<td>Antioxidants that can help protect the liver, improve eyesight, reduce blood pressure, and even reduce the risk of many serious diseases</td>
</tr>
<tr>
<td>4</td>
<td>Lignans</td>
<td>Flaxseeds, grains, legumes, fruits, berries, and vegetables.</td>
<td>Anticarcinogenic effects</td>
</tr>
<tr>
<td>5</td>
<td>Indole-3-carbinol</td>
<td>Cruciferous vegetables like broccoli, cauliflower, collard greens &amp; cabbage.</td>
<td>Lower risk of several types of cancer &amp; protects against DNA damage</td>
</tr>
<tr>
<td>6</td>
<td>Isoflavones</td>
<td>Soybeans</td>
<td>Mimic the effects of estrogen in the human body, so called phytoestrogens. Reduce menopausal symptoms and osteoporosis</td>
</tr>
<tr>
<td>7</td>
<td>Resveratrol</td>
<td>Grapes, peanuts, pistachios, blueberries, cranberries, mulberries, and even dark chocolate.</td>
<td>Cardio-protective effects.</td>
</tr>
<tr>
<td>8</td>
<td>Saponins</td>
<td>Beans</td>
<td>Interfere with the replication of cell DNA, thereby preventing the multiplication of cancer cells</td>
</tr>
<tr>
<td>9</td>
<td>Allicin</td>
<td>Garlic</td>
<td>Anti-bacterial effect</td>
</tr>
<tr>
<td>10</td>
<td>Proanthocyanidins</td>
<td>Cranberry</td>
<td>Reduce the risk of urinary tract infections and will improve dental health.</td>
</tr>
</tbody>
</table>

Rasayana As Phytochemical

Available online at: [http://ijapr.in](http://ijapr.in)
Most of the Rasayana dravya is obtaining from plant. These Dravya may be fruit, root, bark, flower or whole part of the plant etc. Most of these Dravya are very rich in essential nutrients and other non-nutritive chemicals. As research is carried out on it, most of these chemical got identified, isolated and there therapeutic values are establishes later. Now a day, these chemicals are commonly known as phytochemical. Some points are present that shows the similarity between Rasayana and Phytochemicals.

1. According to Ayurveda, Rasayana signifies for prolongation of life and cure of disease. Most of the Phytochemicals do so. It is now well known that the generation of free radicals or reactive oxygen species from incomplete reduction of molecular oxygen during aerobic respiration is closely related to cellular damage. Free radical hits every single cell in the body about 10,000 times a day. It can cause damage both to the structure and function of the body cells. Regulation of the balance between the production of reactive oxygen species by cellular processes and its removal by antioxidant defense system maintains normal physiological processes. This damage has been linked to the onset of many degenerative diseases such as cancer, Athero-sclerosis, Age-Related Macular Degeneration, Cardio-Vascular Disease, inflammatory conditions and diabetes as well as premature aging. Thus, antioxidant compounds in food play an important role as a health protecting factor.

2. The processing and heating in Ayurvedic Panchwidha kashaya kalpana is, such which keeps the nutritive value of the herbs intact. Potency of these Kalpana decreases from Swarasa to Phanta. Phytochemicals in freshly harvested plant foods may be degraded by processing techniques including cooking. The main cause of phytochemical loss from cooking is thermal decomposition.

3. Acharya Charka advocated for the use of herbs grown in The Himalaya because of their more potency. As stressful conditions improve the medicinal value manifold. They generally have biological activity in the plant host and play a role in plant growth or defense against competitors, pathogens, or predators.

4. Various processes used in manufacturing of Rasayana formulation improve their nutritive value, like Shodhana of Visha (Poisons) like Bhalataka. In some cases, processing of food is necessary to remove phytotoxins or antinutrients; for example societies that use cassava as a staple have traditional practices that involve some processing (soaking, cooking, fermentation, etc.), which are necessary to avoid getting sick from cyanogenic glycosides present in unprocessed cassava. Avaleha formulation of Amula (Emblica officinale) in Chwyanprash and Brahmarasayan, Vidanga (Embelia ribes) in - Vidang Avaleha etc. increase their medicinal value manifold. Vitamin-C, present in Emblica officinale remains unaffected by heating. Lycopene present in tomatoes which may remain stable or increase in content from cooking due to liberation from cellular membranes in the cooked food. Food processing techniques like mechanical processing can also free carotenoids and other phytochemicals from the food matrix, increasing dietary intake.

5. Seasonal fully grown drugs (fruits and vegetables) used for making formulation are the basic requirement of good quality of medicines. Mature fruits have more coloring pigments i.e. Phytochemicals. That is why Emblica officinale grown in late winter season is used for making medicine. At this time, coloring pigments are more in amount.

6. Some recent research on Rasayana Dravya are as
   i. Ethanolic extract of Pipalli (Piper nigrum) show antioxidant activity due to presence of alkaloids, Glycosides, tannins and flavonoids.
   ii. Phytochemical analysis of Amula (Emblica officinale) show presence of tannins, saponins, flavanoids and phenols of which flavonoids and saponins were found to be the most inhibitory towards all the pathogens. These Phytochemical acts as Antimicrobial, anti-ulcerous, immunomodulator, anti-carcinogenic etc hence it is useful in curing like diseases like diabetes, cough, asthma, bronchitis, hyperacidity, peptic, skin diseases, cardiac disorders, intermittent fever, graying of hairs.
   iii. Guduchi (Tinospora cordifolia) is king of Ayurvedic medicine. Methanolic and aqueous extract Provides health benefits in cancers, coronary heart disease, diabetics, hypertension, inflammation, microbial, viral and parasitic infections, psychotic diseases, spasmodic conditions, ulcers etc.
   iv. The extract obtained from the fruits of Vehhitaka (Terminalia bellercia) were qualitatively tested to identify the presence of Phytochemicals such as alkaloids, Phenols, Flavonoids, Saponins, tannins, quinones, steroids and Terpenoids. It has anti-diabetic, laxative, anticancer, antimicrobial, antioxidant, analgesic, hepatoprotective activity, anti-ulcerogenic effect.
   v. Withania somnifera also known as Ashwagandha, Indian ginseng and winter cherry. It's Pharmacological value as an adaptogen, antibiotic, abortifacient, aphrodisiac, astringent,

CONCLUSION

As long as we are alive, eating and breathing in a polluted world; our bodies will have to contact with various pathogenic microbes, carcinogens & free radicals. Rasayana or Rejuvenation therapy will help to maintain physical and mental health to promote prolongation of life. Phytochemicals show significant intimacy to Rasayana Dravya. Fruits or vegetables grown in natural conditions have more nutritional values than cultivated in artificial conditions and agricultural in the field. Phytochemicals are unique constituents of a healthy diet and play an important role in the network of antioxidants and nutrients. Eating more fresh and colorful fruits and vegetable is the basic need to maintain health in present scenario.

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