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# **Research Article**



# KARMAS (PHARMACOLOGICAL ACTIONS) - AN AYURVEDIC REVIEW

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#### **ABSTRACT**

The word *Karma* refers to by which the action will be take place. It is responsible for *Samyoga*(Combination), *Vibhaga*(Division) and is resides in *Dravya*. The characteristics of *Dravya* are *Rasa*, *Guna*, *Virya*, *Vipaka*, *Prabhava*. These are the physical and chemical characteristics of the drug. The drug undergo physical and chemical changes because of action of the enzymes(*Pitta* or *Agni*), in the gastro intestinal tract, in *Yakrit*(Liver), and in *Dhatus*(Tiisues), there after it produces two different types of actions viz; General actions and Specific actions. The general action can be termed as *Karma*. It is takes place as manifested in accordance with *Rasa*(Taste), *Guna*(Qualities or Attributes), *Veerya*(Potency), and *Vipaka*(Taste at post digestive effect). whereas the Specific action termed as *Prabhava*. The *Prabhava* is the special efficacy of the drug which cannot be explained by means of *Rasa*, *Guna*, *Veerya*, *Vipaka*. It is also called as *Achintya Veerya*, *Shakti*, *Vichitra Pratyayarabdha*, *Vikriti Vishama Samaveta*, *Anavadharaniya*, *Swabhava*. Here an attempt is made to highlight the important pharmacological action in an *Ayurvedic* view with examples. Further scope of study is to evaluate these pharmacological actions with modern parameters.

Keywords: Ayurveda, Karma, Sharangadhara Samhita, Charaka Samhita, Asthanga Hridaya Proto elements, Pharmacological actions etc.

#### **INTRODUCTION**

The word Karma refers to by which the action will be takes place. It is responsible for Samyoga(Combination), Vibhaga (Division) and is present in Dravya [1] The mechanism action of the drug is depends upon the Panchabhautika configuration (Proto elements). In modern it can be termed as chemical structure of the drug. According to to these chemical components the action of the drugs takes place. The factors responsible for the changes either chemical or physical changes in the drug are Rasa, Guna, Virya, Vipaka. When the drug under go digestion in liver, in tissues, gastro intestinal tract by the action of Agni, produces two different actions. These two different actions are; General Action which is generally termed as Karma, the second one is called as Pravaja Karma or Specific action. In specific action it is observed that even though the Rasa, Guna, Virya, Vipaka are same but the drug action will be different. This happen because of large number of molecules gathered together and combines with Agni and the pharmacological action is produced. The molecules are nothing but the Panchabhautika Anus(Molecules). pharmacological actions are; Deepana, Pachana, Samshodhana, Samshamana, Anulomana, Sramsana, Bhedana, Rechana, Chedana, Lekhana, Grahi, Sthambhana, Madakari, Pramathi, Abhishyandi, Vyavayi, Vikashi, Rasayana, Vajeekarana, Jeevaniya, Balya, Brimhana, Langhana, Medhya.

#### **DISCUSSION**

The detail description of each pharmacological actions are enumerated as follows:

1. **Deepana**[2]- Deepana in general means appetizers.

#### "PACHENNAAMAM VANHIKRIT CHA DEEPANAM TADYATHA MISHI|"

The drugs which stimulate or increase the either <code>Jatharagni</code>(Digestive fire), <code>Bhutagni</code>(Five proto elements), and <code>Dhatwagni</code>(Tissue metabolism) without the performing <code>Ama Pachana</code>(Improperly metabolized food digestion) called as <code>Deepaniya Dravyas</code>.

Ex: Mishi(Shatapushpa- Anethum sowa Kurz,). Acharya Charaka<sup>[3]</sup> mentioned ten Deepanya drugs viz; These drugs are carminative in nature which act as appetite stimulants. The drugs are; Pippali(Piper longum Linn), Pippali moola(Root of Piper longum Linn), Chavya(Piper retrofractum Vahl), Chitraka(Plumbago zeylanica Linn), Shunthi(Zingiber officinale Rosc), Amlavetas(Garcinia pedunculata Roxb), Maricha(Piper nigrum Linn), Ajamoda (Carum roxburghianum DC), Bhallataka(Semicarpus anacardium Linn), Hingu(Ferula narthex Boiss). These drugs are predominant of Agni and Vayu Mahabhuta(Proto elements). According to Acharya Arunadatta<sup>[4]</sup> the Deepaniya drugs performs Ama Pachana also. Therefore in Charaka Samhita Paachaniya Dashemani is not mentioned.

2. **Pachana**<sup>[5]</sup> - Paachana in general called as Digestives.

## "PACHATYAAMAM NA VANHIM CHA KURYAATTADDHI PAACHANAM | NAAGAKESHARAVADVIDYAACCHITRO DEEPANA-PAACHANAH ||"

The drugs which digest the *Ama* alone without stimulating the *Agni*. Ex: *Chitraka*(*Plumbago zeylanica* Linn), *Nagakeshara*(*Messua ferrea* Linn). *Acharya Arunadatta*<sup>[6]</sup> explained that the activity of *Agni* and the drug which improves the digestion process is called as *Paachana*.

3. **Samshodhana**<sup>[7]</sup>- Purification of the body called as *Samshodhana*.

## "STHAANAAD BAHIRNAYED OORDHWAM ADHO VA MALA SANCHAYAM | DEHA SAMSHODHANAM TASYAAD DEVADAALI PHALAM YATHA ||"

The drugs which expel the *Doshas* and *Malas* through the upward direction(Through mouth), and downward direction(Through anus) known as *Samshodhana Karma*. Ex: *Devadali Phala* (*Luffa echinata* Roxb). *Acharya Charaka*[8] considered as *Samshodhana Karma* are four viz; *Vamana*, *Virechana*, *Shirvirechana*, *Niruha Basti* While *Acharya Sushruta*[9] considered *Samshodhana* are of two types viz; *Vamana*, *Virechana*.

4. **Samshamana** [10],[11]. The palliative measures are called as Samshamana.

#### "NA SHODHAYATI NA DWESTHI SAMAAN DOSHAANSTATODDHATAAN | SAMEEKAROTI VISHAMAAN SHAMANAM TADYATHA AMRUTA ||"

The drugs which do not expel the *Doshas* either upward direction or down ward direction and without aggravating the *Doshas*, brings them into normal state called as *Samshamana*. Ex: *Guduchi(Tinospora cordifolia Willd)*.

5. Anulomana[12]- Anulomana Karma are mild laxatives.

#### "KRITWA PAAKAM MALAANAAM YADBHITWA BANDHAM ADHONAYET | TACCHANULOMANAM JNEYAM YATHA PROKTA HARITAKI ||"

The drugs which do *Mala Paka*(Digestion) and release the *Bandha*(Sphincter) to expel them downward direction known as *Anulomana*. The drugs which causes downward movement of *Vata*(Flatus) is called as *Anulomana*. Ex: *Haritaki*(*Terminalia chebula* Retz). This is dominated by *Sara Guna*(Laxative).

6. **Sramsana**<sup>[13],[14]</sup>- The laxative or simple purgatives are termed as *Sramsana*.

#### "PAKTAVYAM YADPAKTAIVA SHLISHTAM KOSTHE MALADHKAM | NAYATYADHAH SAMSANAM TADYATHA SYAAT KRITAMAALAKAH ||"

The Mala which are attached to the Kostha or internal channels will be expelled out without undergoing digestion called as Sramsana Karma. Ex: Aragwadha.(Cassia fistula Linn)

7. **Bhedana**<sup>[15],[16]</sup>- The purgatives or chologogues are termed as *Bhedana*.

#### "MALAADIKAMBADDHAM YADVADDHAM VA PINDITAM MALAIHI | BHITVAADHAH PAATAYATI YAD BHEDANAM KATUKI YATHA ||"

The Malas which are Baddha(Solid), Abaddha(Liquid) will be expelled through the Guda Marga(Anus) is termed as Bhedana. Ex:- Katuki. (Picrorhiza kurroa Royle ex Benth). These drugs constricts the gall bladder and expels the excess bile in to gastro intestinal tract which causes peristaltic movements lead to purgative action. Acharya Charaka mentioned ten drugs named Bhedaniya Dashemani, which includes; Trivritta(Operculina turpethum Linn), Arka(Calotropis procera (Ait) R.Br), Eranda(Ricinus communis Linn), Langali(Gloriosa superba Linn), Danti(Baliospermum montanum Muell-Arg), Chitraka(Plumbago zeylanica Linn), Chirabilva(Holoptelea glauca Edgew), Shankhini(Albezzia lebbeck Benth), Katuka(Picrorhiza kurroa Royle ex Benth), Swarnakshiri(Argemone mexicana Linn).

8. **Rechana**<sup>[17]</sup>, [18] - Cathartics drugs are called as Rechana.

## "VIPAKWAM YADPAKWAM VA MALAADI DRAVATAAM NAYET | RECHAYATYAAPI TAJNEYAM RECHANAM TRIVRUTA YATHA ||"

The Pakwa or Apakwa Mala is expelled out in liquid form through the anus called as Rechana. Ex: Trivrutta(Operculina turpethum Linn). These drugs are predominant by the Prithwi and Jala Mahabhuta. Acharya Charaka elaborated the action is of three modes viz; Sukha Virechana(Trivrutta), Mrudu Virechana(Aragwadha), Teekshna

Virechana (Snuhi Ksheera). These drugs possess Ushna, Teekshna, Sookshma, Vyavayi, and Vikasi Gunas.

9. *Chedana*<sup>[19]</sup>- The scarification action is termed as *Chedana*.

# "SHLISTHAAN KAPHAADIKAN DOSHAAN UNMOOLAYATI YADBALAAT | CHEDANAM TADYATHA KHSAARA MARICHAANI SHILAATATU

The action which uproot the adhered *Doshas* by forcefully called as *Chedana*. Ex: *Maricha (Piper nigrum* Linn), *Shilatatu*.

10.  $\textit{Lekhana}^{[20],[21]}$ - The dehydrating agents are termed as Lekhana drugs.

#### "DHAATUN MALAANVA DEHASYA VISHOSHYO LEKHAYECCHA YAT | LEKHANAM TADYATHA KSHAUDRAM NEERAM USHNAM VACHA YAVAH ||"

The action which reduce and scrape the tissues and unwanted Malas (Wastes) through dehydration termed as Lekhana. Ex: Vacha(Acorus calamus Linn), Yava(Barley), Kshaudra(Honey), Ushnodaka(Hot water). Any drug possessing Laghu(Light), Tikshna(Penetrating), Katu Vipaka(Pungent at post digestive effect), Ushna Virya(Hot in potency) does the Lekhana Karma. i.e curative, scraping and absorptive action on Dosha Dhatu, and Malas. The Lekhaniya Dravyas can be termed as hyperlipidaemia and anti-obesity drugs. Acharya Charaka mentioned ten Lekshaniya drugs Viz; Musta(Cyperus rotundus Linn), Kustha(Saussurea lappa C.B. Clarke), Haridra(Curcuma longa Linn), Daruharidra(Berberis aristata DC), Vacha(Acorus calamus Linn), Ativisha(Aconitum heterophyllum Wall), Katuka(Picrorhiza kurroa Royle ex Benth), Chitraka(Plumbago zeylanica Linn), Chirabilva(Holoptelia integrifolia Planch), Shweta Vacha

11. **Grahi**<sup>[22]</sup>- The drugs which acts as Absorbent called as *Grahi*.

## "DEEPANAM PAACHANAM YATSYADUSHNATWAD DRAVASHOSHAKAM | GRAHI TACCHA YATHA SHUNTHI JEERAKAM GAJAPIPPALI ||"

The action which acts as appetizer and digestive by absorbing the fluids from the body termed as *Grahi*. Ex: *Shunthi(Zingiber officinale Rosc)*, *Jeeraka(Cuminum cyminum Linn)*, *Gaja Pippali(Piper chaba Hunter)*. These drugs are predominant by *Prithwi* and *Vayu Mahabhuta*. *Acharya Charaka* Mentioned *Purisha Sangrahaniya* and *Mutra Sangrahaniya Dravyas*. Viz;

- PURISHASANGRAHANIYA<sup>[23]</sup>- The drugs which control excess elimination of stool are called as Purishasangahaniya Dravyas. Viz; Priyangu(Callicarpa macrophylla Vahl), Ananta(Alhagi pseudalhagi), Amrasthi(Mangifera indica Linn), Aralu(Ailanthus excelsa Roxb), Lodhra(Symplocos racemosa Roxb), Mocharasa(Salmalia malabarica Schott & Endl), Lajjalu(Mimosa pudica Linn), Dhatakipuhspa(Woodfordia fruticosa Kurz), Bharangi(Clerodendrum serratum Linn), Padmakeshara(Nelumbo nucifera stamens).
- MUTRASANGRAHANIYA<sup>[24]</sup>- The drugs which control excess elimination of urine called as Mutrasangrahaniya Dravyas. Viz; Jambu(Syzygium cumini Linn), Amra(Mangifera indica Linn), Plaksha (Ficus lacor Buch-Ham), Vata(Ficus bengalensis Linn), Parisha(Ficus arnittiana), Udumbara(Ficus glomerata Roxb), Ashwattha(Ficus religiosa Linn), Bhallataka(Semicarpus anacardium Linn),

Ashmantaka (Ficus rumphii Blume), Somavalka(Myrica esculenta Buch-Ham).

12. **Sthambana**<sup>[25]</sup>- The drugs act as constipation known as Sthambana.

#### "RAUKSHAT SHAITYAAT KASHAYATWAT LAGHUPAAKACCHA YAD BHAVED | VAATAKRIT STHAMBANAM TASYAADYATHA VATSAKATUNTUKAU ||"

The one which prevents the expulsion of fluids or *Malas* because of its astringent, and light in property called as *Sthambana*. Ex: *Kutaja(Holarrhena antidysenterica* Linn), *Shyonaka(Oroxylum indicum* Vent). The *Sthambana* has *Ruksha*(Dry), *Sheeta*(Cold), *Kashaya*(Astringent in taste), *Laghu Paka*(Light in digestion) properties. It is *Vatakara*(Increases *Vata Dosha*).

13. *Madakari*<sup>[26]</sup>- The intoxicants called as *Madakari* drugs.

#### "BUDDHI LUMPATI YAD DRAVYAM MADAKARI TADUCHYATE | TAMOGUNA PRADHANAM CHA YATHA MADYA SURAADIKAM ||"

The destruction of wisdom, intellect, memory, and produces intoxication due to predominant of *Tama Guna*(One of the *Dosha* of the mind) is called as *Madakari*. Ex: *Madya*(Alcohol), *Sura*(Wine).

14. **Pramathi**<sup>127</sup>: The drugs of specific effects on internal channels called *Pramathi*.

#### "NIJA VEERYENA YAD DRAVYAM STROTOBHYO DOSHA SANCHAYAM| NIRASYATI PRAMATHI SYAAT TADYATHA MARICHAM VACHA||"

Due to specific effect and potency of the drugs will expel the *Doshas, Malas* from the internal channels called as *Pramathi.* Ex: *Maricha (Piper nigrum* Linn), *Vacha(Acorus calamus* Linn). These drugs act only at *Dosha Sanchaya* that is during the early stage of pathogenesis.

15. Abhishyandi[28]- The obstructants are called as Abhishyandi.

#### "PAICHCHILYAD GAURAVAD DRAVYAM RUDDHVA RASAVAHA SHIRAH| DHATTE YADGAURAVAM TATSYADABHISHYANDI YATHA DADHI||"

The obstruction in *Rasavaha Siras* causes due to *Picchila*(Sticky), and *Guru*(Heavy) which in turn produces heaviness in the body known as *Abhishyandi*. Ex: *Dadhi* (Curd).

16. **Vyavayi**<sup>[29]</sup>- The CNS stimulant followed by depressant called as *Vyavayi*.

#### "POORVAM VYAPYAAKHILAM KAAYAM TATAH PAAKAM CHA GACCHATI| VYAVAYI TADYATHA BHANGA PHENAM CHA AHISAMUDBHAVM ||"

The drugs which spreads all over the body first and then undergo for metabolism is called as *Vyavayi*. The CNS stimulation followed by CNS depressants. Ex: *Bhanga*(*Cannabis sativa* Linn), *Ahiphena* (*Papaver somniferum* Linn)

17. Vikasi<sup>[30]</sup>- The drugs of connective tissues loosens called as Vikasi.

#### "SANDHI BANDHAAN SHITHILAN KAROTI VIKASI TAT| VISHLESHYAUJASHCHA DHATUBHYO YATHA KRAMUKA KODRAVAH||"

The drugs which loosens the ligaments of the joints, results in laxity of the tissues and also separates the *Oja*(Essence of *Sapta Dhatus-Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra*) from the *Dhatus* called as *Vikasi.* Ex: *Karamuka*(*Areca catechu* Linn), *Kodrava*(*Paspalum scrobiculatum* Linn)

18. **Rasayana**<sup>[31]</sup>- The rejuvenating and revitalizing drugs are called as *Rasayana*.

## "RASAAYANAM CHA TAJNEYAM YAJJARA VYADHI NASHANAM| YATHAAMRUTA RUDANTI CHA GUGGULUSHCHA HARITAKI ||"

The one which destroys *Jara* (Old age), *Vyadhi*(Diseases) is called as *Rasayana*. Ex: *Guduchi, Rudanti, Guggulu, Haritaki*. The rejuvenating and revitalizing drugs are called as *Rasayana Dravyas*.

19. **Vajikarana**[32]- The aphrodisiac drugs are called as *Vajikarana* Drugs.

## "YASMAAD DRAVYAD BHAVET SREESHU HARSHO VAAJIKARAM CHA TAT | YATHA NAAGABALAADYAHA SYUR BEEJAM CHA KAPIKACCHUJAM ||"

The aphrodisiac action of the drugs which produces orgasm and libido in men and women called as *Vajikara*. Ex: *Nagabala*(*Grewia hirsuta* Vahl), *Kapikacchu*(*Mucuna prurita* Hook)

20. **Jeevaniya**<sup>[33]</sup>- The vitalizing and life promoting herbs called as *Jeevaniya* drugs.

#### "JEEVANAM AYUHU TASMAI HITAM JEEVANIYAM |"

These drugs have the capacity to sustains and protect the life force and also nourish the tissues of the body and maintain the cellular functions. These drugs are anabolic in nature. Hence builds the tissues, give strength and sustain the body. These drugs are also used in patients suffering from Malnutrition. The drugs are as follows; Jeevaka (Microstylis wallichii Lindl), Rishabhaka(Microstylis mucifera Ridley), Meda(Polygonatum verticillatum All), Mahameda (Polygonatum cirrhifolium Royle), Kakoli(Nomocharis oxypetala Royle), Kshirakakoli(Lilium polyphyllum D. Don), Mudgaparni (Phaseolus trilobus Ait), Mashaparni(Teramnus labialis Spreng), Jivanti(Leptadenia reticulata A W. & A), Yashtimadhu (Glycyrrhiza qlabra Linn).

21. **Balya**[34]- The drugs which promote strength the tissues and to the nerves called as *Balya*.

# "BALYAM UPACHAYAUJAHA SHAKTIKARATWAT |"

The drugs are; Aindri(Bacopa monnieri Linn), Kapikacchu(Mucuna prurita Hook), Shatavari(Asperagus racemosus Willd), Mashaparni (Teramnus labialis Spreng), Kshirvidari(Ipomoea digitata Linn), Ashwagandha(Withania somnifera Linn), Shalaparni (Desmodium gangeticum DC), Rohini (Soymida febrifuga A. Juss), Bala(Sida cordifolia Linn), Atibala(Abutilon indicum Linn).

# 22. Brumhana[35]-

#### "BRIHATWAM YAT SHARIRASYA JANAYET TACCHA BRIMHANAM" |

The word Brimhana means to nourishment, Nutritive and promoting corpulence. The Dravyas which increases muscle bulk called as Brimhaniya Dravyas. The drugs mentioned in this group are as; Ksheerini(Ksheera Vidari-Ipomea digitata Linn), Dugdhika (Euphorbia prostrate W. Ait), Ashwagandha(Withania somnifera Dunal), Kakoli (Nomocharis oxypetala Royle), Ksheerakakoli(Lilium polyphyllum D. Don), Bala (Sida cordifolia Linn), Atibala(Abutilon indicum Linn), Vanakarpasa(Thespesia lampas (Cav). Dalz Payasya(Vidarikanda- Pueraria tuberosa DC), Vidhaara(Vriddhadaru-Argyreria nervosa(Burm.f) Boj). These drugs are used in Ksheena (Emaciation), Kshata(Injury), Krisha(Lean), Vriddha(Old age), Durbala (Weak person), person who walks excess, indulging in sexual activity, and intake of excess alcohol. The qualities of these drugs are Guru(Heavy), Sheeta(Cold in potency), Snigdha(Demulcent), Picchila(Sticky), Sthula(Stout), Manda(Slow), Sthira(Stable), Shlakshna(Smooth).

23. **Langhana**<sup>[36]</sup>- The drugs gives lightness to the body called as Langhana Karma.

## "LANGHANE LAGHUHU- YAT SHARIRA LAAGHAVAKARAM DEHE TAD LANGHANAM SMRITAM |"

The drug which does the Karshana or Lekahan(Scraping) are called as Langhana or Lekhana Dravyas. As per Acharya Charaka the drugs which produce lightness in the body known as Langhana Karma. As per Acharya Sushruta these Lekhaniya drugs are predominant by Vayu and Agni Mahabhutas. The qualities of these drugs are: Laghu(Light), Ushna(Hot in potency), Teekshna(Penetrating and Sharpness action). Vishada(Clearness), Ruksha(Drvness). Sookshma(Minuteness), Khara(Roughness), Sara(Mobility), Kathina(Hardness). The Lekhaniya Dravyas are; Mustha(Cyperus rotundus Linn, Cyperaceae), Kustha(Saussurea lappa C.B clarke, Asteraceae), Haridra(Curcuma longa Linn, Zingiberaceae), Daruharidra(Berberis aristata Roxb.ex DC, Berberidaceae), Ativisha(Aconitum Vacha(Acorus calamus Linn, Araceae), heterophyllum wall. Ex Royle, Ranunculaceae), Katuki(Picrorrhiza kurroa Royle ex Benth, Scrophulariaceae), Chitraka(Plumbago zeylanica Linn, Plumbaginaceae), Chirabilva(Holoptelea integrifolia Planch, Ulmaceae), Shweta Vacha(Iris ensata Thumb, Araceae). These drugs help to increase the metabolism which help in utilizing the body fat and increasing the body vitality. These drugs also helps in the eliminating excess cellulite deposition, obstruction, blocks. clots, haematoma, obesity etc metabolic diseases from the body and prevent further disease pathogenesis.

24. Medhya[37]- The brain tonics are termed as Medhya.

#### "MEDHAAYA HIATAM MEDYAM\"

The drugs which are good for brain called as Medhya. The drugs which promotes intellect, memory called as Medhya, Ex: Aindri(Bacopa monnieri Linn), Mandukaparni(Centella asiatica Linn), Bramhi(Bacopa monnieri Linn), Shankhapushpi(Convolvulus cordifolia pluricaulis Chois), Guduchi(Tinospora Haritaki(Terminalia chebula Retz), Vacha(Acorus calamus Linn), Jatamansi(Nordostachys jatamansi DC) etc. These predominant of Madhura Rasa(Sweet taste), Madhura Vipaka(Sweet at post digestive effect), and Sheeta Virya(Cold in potency). The action is considered as Prabhava(Specific effect) of the drug.

#### CONCLUSION

By the above discussion the general action can be termed as Karma. It is takes place and manifested in accordance with Rasa(Taste), Guna(Qualities or Attributes), Veerya(Potency), and Vipaka(Taste at post digestive effect). whereas the Specific action termed as Prabhava. It is the special efficacy of the drug which cannot be explained by means of Rasa, Guna, Veerya, Vipaka. Here the Rasa, Guna, Virya, Vipaka can be correlated with chemical structure of the drug as well as plant constituents of the drug. Here an attempt was made to highlighted the Ayurvedic perspective of the drug action and qualities which help to perform the action of the drug.

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