

## A REVIEW ON ROLE OF *VYOSHADI SAKTU* IN *ATISTHAULYA* W.S.R. TO OBESITY

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### ABSTRACT

Obesity is one of the major risk factor of various lifestyle disorders. In 2016, more than 1.9 billion adults, 18 years and older, were overweight. of these over 650 million men and women were obese. At least 3.4 million adults die each year as a result of being overweight or obese. Obesity is also the condition which affects the external appearance or personality of any individual. The first adverse effect of obesity to emerge in population in transition are hypertension, hyperlipidaemia and glucose intolerance, while coronary heart disease and long term complications of diabetes, such as renal failure begin to emerge several years later. In *Ayurveda Samhita*, complete diet therapy is given which will be beneficial for obesity patients in the form of

*Patya, Apathya, Ahara, Vihar*. As in *Ayurveda*, *Sthoulya* can be considered under *Santarpana janya vikara* and *vyoshadi saktu* is indicated in such kind of *santarpanjanya vikara* like *stahulya*. This review is aimed to evaluate the role of “*Vyoshadi saktu and its ingredients*” as a *Pathya* as well as remedy for obesity. Most of the components of *Vyoshadi Saktu* have *kapha-vatahara, Tridosahara, Deepana, Pachana, anulomana, lekhana, Bhedana, Chedana* and *medohar* activities. After Review of Ayurvedic literatures, various researches published in International and National journals, it can be concluded that *Vyoshadi Saktu* with these pharmacotherapeutic properties is likely to break down the *samprapti* of *sthaulya Roga* or Obesity and check its progress without producing weakness in the body.

**KEYWORDS:** *Ayurveda, Vyoshadi Saktu, Sthoulya, Obesity, Santarpanjanya Vyadhi.*

## INTRODUCTION

Overweight and obesity are the 5th leading risk of global deaths. Worldwide, obesity has more than doubled since 1980. In 2016, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 650 million men and women were obese. At least 3.4 million adults die each year as a result of being overweight or obese. In addition, 44 percent of the diabetes burden, 23 percent of ischaemic Heart disease burden and between 7 to 41% of certain cancer burdens are attributable to overweight and obesity. Overweight and obesity are linked to more deaths worldwide than underweight. In India 1.3% males and 2.5 % females aged more than 20 years were obese in the year 2008. An obesity is a key risk factor in natural history of other chronic and non- communicable diseases, the typical time sequences of emergence of chronic diseases following the increased prevalence of obesity is important in public health planning. The first adverse effect of obesity to emerge in population in transition are hypertension, hyperlipidaemia and glucose intolerance, while coronary heart disease and long term complications of diabetes, such as renal failure begin to emerge several years later.<sup>[1]</sup>

As in Ayurveda, *Sthaulya* can be considered under *Santarpanajanya vikara*, *Medo pradoshaja vikara* which is *Kapha pradhana vyadhi*, factors promoting *Sthaulya*<sup>[2]</sup> are - excess intake of *Kapha pradhana ahara* (more intake of *kleda* and *Snidga ahara* among *Aharaparinamakara bhavas*), sedentary lifestyle (*Sukha shayyasanam*), lack of mental stress (*Harshanitya, achintya*), decreased physical exercise (*Avyayama*) and it can also occur due to *Beeja dosha*. In modern medical science, *Sthaulya* can be co-related to Obesity caused by excess calorie intake and less Expenditure.<sup>[3]</sup> Park defined obesity as an abnormal growth of adipose tissue due to an Enlargement of fat cell size (hyper trophic obesity) or an increase in fat cell number (hyperplastic obesity) or a combination of both.

### Need of Study

According to WHO the world wide latest report of prevalence of obesity is as follows :

- 250 million cases of obesity reported
- 7 % are adults of total population

Total health care expenditure for obesity patients is 2-8 %

British medical journal states that 2 decades ago 1/3 of population worldwide were suffering from obesity.

In Ayurveda Samhita, complete diet therapy is given which will be beneficial for obesity patients in the form of *Patya, Apathya, Ahara, Vihar*. For best Ayurvedic treatment for obesity also have to concentrate on diet regimen other than medicinal treatment.

## OBJECTIVE

This review is aimed to evaluate the role of “*Vyoshadi Saktu and its ingredients*” as a *Pathya* as well as remedy for obesity.

## MATERIALS AND METHODS

Review of Various Ayurvedic Literatures, Research Publication of International, National Journals, Research Portals, Web world, regarding previous clinical, experimental, phytochemical etc. researches on *Vyoshadi Saktu* and ingredients has been done to find out role of *Vyoshadi Saktu* and its ingredients in obesity to justify the review title.

### Ayurvedic Review of *Sthaulya*

*Ayurvedacharyas* described so many etiological factors of *Sthaulya roga* in their *Samhitas* which are related to all aspects of life and affect the body from outside and inside also. The hereditary (*Beejadoshha*) component besides dietetic, regimomial and psychological factors in the causation of *Sthaulya* has been described by *Charak Samhita*.<sup>[4]</sup> These are most of exogenous type. Except these factors, the components which may vitiate *Meda* and *Shlesma* could be considered as a causative factor of *Sthaulya*. Endogenous type of causes had mentioned by *Acharya Sushrut* and *Maharshi Vagbhat*. Defective intercellular metabolism had been considered as main cause besides other components in etiopathology of *Sthaulya* by *Vagbhat*.<sup>[5]</sup> Only *Charak* has defined *Beeja dosha* as one of the cause besides other, other texts have humbly followed the *Brihatrayis's* description regarding etiological factors of *Sthaulya*.

### Samprapti<sup>[6]</sup>

Due to passage of *Vayu* being obstructed by *Meda*, The aggravated *Vayu* moves around *koshtha*, and excites digestive fire and also absorbs the food, thus the food is digested quickly and further enhances the craving for food intake, however if food intake is delayed the person is inflicted with the serious disorders. These Both i.e. *Agni* and *Vayu* specifically produce complications and burn the over obese person in the same way as forest fire burns the forest. In event of over increase of *Meda* the *Vayu* etc. *doshas* producing serious ailments.

### Samprapti Ghatakas

- *Udabhavasthana* - *Amashaya*
- *Adhithana* - Whole body specifically *Udara, Sphika, Stana*
- *Vyakti* - Whole body
- *Dosha* - *Tridosha, Samanavayu Vyanvayu, Pachaka Pitta, Kledaka Kapha,*
- *Dushya* - *Rasa and Meda*
- *Srotasa* - *Annavaha, Rasavaha, Mamsavaha, Medovaha*
- *Srotodushti* - *Sanga, Avarana, Amatha*
- *Agnimandya* - *Medodhatvagnimandya, Jatharagnimandya*
- *Ama* - *Medodhatvagnimandyajanit, Jatharagnimandyajanit,*
- *Swabhava* - *Chirakalin*

### Chikitsa of Sthaulya

In *Ayurveda*, general principles management of any disorder is divided into 3 parts, *Samshodhana, Samshamana, Nidana Parivarjana*. *Charaka* has mentioned *Sthaulya* under the caption of *Santarpanajanita Vyadhi* and for its management, *Vamana, Virechana* and *Raktamokshana* are recommended. He also suggested *Ruksha, Tikshna* and *Ushna basti* for the management purpose of *Sthaulya*.<sup>[7]</sup> *Shamana Chikitsa* can be implemented through seven different ways, *Deepana, Marutsevana, Kshudha Nigraha, Pachana, Atapasevana, Trusha Nigraha, Vyayama*.<sup>[8]</sup> Among *Shad Upakrama, Langhana* and *Rukshana* can be performed for *Samshaman* purpose in *Sthaulya*. Administration of *Guru* and *Apatarpaka* articles which possess additional *Vata, Shleshman* and *Medonashaka* properties is considered as an ideal for *Samshaman* therapy. *Chakrapani* has explained that *Guru Guna* is sufficient to alleviate vitiated *Agni* and *Atikshudha*. *Apatarpana* property provides less nourishment and thus leads to depletion of *Meda*. For example *Madhu* possess *Guru* and *Ruksha* properties, hence it is ideal for management of *Sthaulya*. *Gangadhara* has interpreted that *Guru* property is suitable to alleviate *Tikshnagni* and vitiated *Vata* especially *Kosthagata Vata* which ultimately reduces *Atikshudha* and *Apatarpan* property causes reduction of *Meda*.<sup>[9]</sup>

*Ayurveda* also provides better solutions in the form of proper dietary management, lifestyle advises *panchkarma* like detoxification and bio-purification procedures, medicaments and yoga and rejuvenation therapies for better management in Diabetes mellitus.<sup>[10]</sup> Regarding the *Pathya Ahara* of *Sthaulya* it should be kept in mind that whenever *Ahara kalpa* is to be given, it should be *Kaphahara* along with *Vatahara*.

### Review of “Vyoshadi Saktu”

Acharya Charaka has mentioned ‘Vyoshadi saktu’ in *santarpan janit roga*.<sup>[11]</sup> According to Acharya Charaka “Guru cha Aptarpana” is one among the *shreshta chikitsa* for *Sthoulya*.<sup>[12,13]</sup>

“Vyoshadi Saktu” is mentioned as a *Pathya Kalpana* in *Sthula Prameha* as well as in *Sthoulya Chikitsa*. In *Vyoshadi Saktu* there are 28 herbal ingredients used for preparation. Preparation of authentic and quality *Vyoshadi Saktu* can give effective results in the treatment of diabetes. Hence from raw drugs, in process and finished product if analysis of the ingredients is done as per the *Ayurvedic* pharmacopeia one can assure the quality of Standardization of *Vyoshadi Saktu* preparation.<sup>[14]</sup> The physicochemical standardization of polyherbal formulation of *Vyoshadi Saktu Churna* was carried out. The individual ingredients of the formulation were authenticated and standardized as per *Ayurvedic Pharmacopoeia* of India. The in-house formulation was prepared and studied for various physicochemical properties and found to be at par with the standards mentioned in the *Ayurvedic Pharmacopoeia*.<sup>[15]</sup>

### Ingredients

*Shunti, Maricha, Pippali, Haritaki, Amalaki, Vibhitaki, Vidanga, Katuka, Haridra, Daruharidra, Patha, Shigrubija, Kantakari, Brahti Shalaparni, Hingu, Kebukmoola, Dhanyaka, Ajmoda, Chitakamoola, Jeeraka, Hapusha, Atis, Sauvarchala lavana, Madhu, Goghrita, Tila taila, Yavachurna.*

**Preparation:** All the components of *Vyoshadi saktu* except *Yava, Til Tail, Madhu, and Goghrita* are in equal proportion (1 part of each) and in dry form. They were grinded and made fine powder, then after proper mixing the contents adding *Til tail, Madhu, and Goghrita* individually equal to total quantity of fine powder (24 part each), after then adding 16 times of *Yava Saktu* of total prepared quantity (96×16 part). All the prepared medicine dried and packed in airtight packs and labeled.

**Dose:** 60gm-B.D. in morning and evening in empty stomach with mixing in water to make *manth kalpana*. Let us consider the details of each constituent of *Vyoshadi Saktu*.<sup>[16]</sup>

Table no. 1: Ingredients of Vyoshadi Saktu.

S.No.	Drug Name	Property Mentioned in Ayurveda.	Previous Researches
1	<i>Shunthi</i> (Zingiber Officinale)	<i>Guna – Laghu, Snigdha, Rasa- Katu Vipaka- Madhur Virya – Ushna Karma- Kapha Vata shamaka. Trptighna, Rochana, Deepan, Pachana, Vatanulomana, Rakta Shodhaka, Amapachana, Srotoshodhaka, Jwaraghna.</i> <sup>[17]</sup>	The putative active compounds are nonvolatile pungent principles, namely gingerols, shogaols, paradols, and zingerone. The antioxidant, anti-inflammatory, antiemetic, and gastroprotective activities, chemo-preventive and antineoplastic effects. <sup>[18]</sup> Immunomodulatory, anti-tumorigenic, anti-apoptotic, anti-hyperglycemic, anti-lipidemic actions. <sup>[19]</sup>
2	<i>Pippali</i> (Piper Longum)	<i>Guna – Laghu, Snigdha, Tikshna Ras- Katu Vipaka-Madhur Veerya- Anushna Sheet Karma-Kapha-Vata Shamak Aruchi, agnimaandya, ajeern, vibandh, Gulma, Yakrut vikara, Pleeha vriddhi, Krimi, Hridroga, Pandu, Shwas, kasa, Hikka, Medakapha Shamak with Madhu.</i> <sup>[20]</sup>	The <i>P. longum</i> fruit have many alkaloids and related compounds such as piperine, methyl piperine, piperonaline, piperettine, asarinine, piperundecalidine, piper longumine, piperlonguminine, brachystamide-B etc. Hypolipidemic activity of <i>P. longum</i> can be attributed towards the active principal ingredients present in the Fruits. <sup>[21]</sup> It is also reported that Piperine significantly possesses a lipid lowering effect and anti-obesity activity without any change in appetite. <sup>[22]</sup>
3	<i>Marich</i> (Piper Nigrum)	<i>Guna- Laghu, Tikshna Rasa- Katu Verya- Ushna Vipaka- Katu Karma-Vaat-kapha shamaka Deepana, Agnimaandya, Ajeerna, Yakrut vikara, Hrida daurbalya, Aadhmaana, Mutra Krichcha</i> <sup>[23]</sup>	Piperonal attenuates obesity and associated ailments by working on multiple targets and paves the way to develop a novel herbal formulation. <sup>[24]</sup> It's extracts significantly reduced the body weight, fat%, and ameliorated HFD-induced hyperlipidemia and its constituents. <sup>[25]</sup>



4	<i>Amalaki</i> ( <i>Embelica Officinalis</i> )	<i>Guna- Guru, Ruksha, Sheeta</i> <i>Rasa- Pancharasa (Lavana</i> <i>Rahit) amla pradhana</i> <i>Vipaka- Madhur</i> <i>Veerya- Sheeta</i> <i>Karma- Tridosahar, Mainly</i> <i>Pitta shamaka</i> <i>,Rochana, Deepana, Anulomana,</i> <i>Yakrut uttejak, Agnimandya,</i> <i>Vibandhanashaka.</i> <sup>[26]</sup>	Aqueous <i>E. officinalis</i> extract possess significant anti-obesity potential. <sup>[27]</sup> <i>Amla</i> produced significant hypolipidemic effect along with a reduction in blood pressure. Addition of <i>Amla</i> to the currently available hypolipidemic therapy would offer significant protection against atherosclerosis and coronary artery disease, with reduction in the dose and adverse effects of the hypolipidemic agents. <sup>[28]</sup> It also manages dyslipidemia significantly without causing any adverse effects. <sup>[29]</sup>
5	<i>Vibhitaka</i> ( <i>Terminalia Belerica</i> )	<i>Guna- Ruksha, Laghu</i> <i>Rasa- Kashaya</i> <i>Vipaka- Madhur</i> <i>Veerya- Ushna</i> <i>Tridosha Shamka, especially</i> <i>Kapha shamaka.</i> <i>Deepana, Anuloman, Ras, Rakta,</i> <i>Maans evam Meda Vikara.</i> <sup>[30]</sup>	Fruit of <i>Terminalia bellirica</i> has been reported to have hypoglycaemic and hypolipidemic effects & can be potentially used in the treatment of obesity. <sup>[31],[32]</sup>
6	<i>Haritaki</i> ( <i>Terminalia Chebula</i> )	<i>Guna- Laghu Ruksha</i> <i>Rasa- Pancha Rasa (Lavana</i> <i>Varjit), Kashaya Pradhana</i> <i>Vipaka- Madhur</i> <i>Veerya- Ushna</i> <i>Karma- Tridoshhar, especially</i> <i>Vata Shamak</i> <i>Deepan, Paachan, Anulomak,</i> <i>Virechaka, Vibadhashamak,</i> <i>Udar Roga, Malashodhaka,</i> <i>Srotoshodhaka.</i> <sup>[33]</sup>	It has a potential to reduce the obesity effects through different biochemical and body parameters. <sup>[34]</sup> The levels of total serum cholesterol, triglyceride and total protein with are actually raised in atherogenic diet, can be lowered significantly. <i>Haritaki</i> can be utilized for providing dietary management in the prevention of atherosclerosis in hyperlipidemic patients. <sup>[35]</sup>
7	<i>Vaya Vidanga</i> ( <i>Embelia ribes</i> )	<i>Guna- Laghu, Ruksha, Teekshna</i> <i>Rasa- Katu, Kashaya</i> <i>Vipaka-katu</i> <i>Veerya- ushna</i> <i>Karma- Kapha Vata Shamak</i>	<i>Embelia ribes</i> contain embelin as an active constituent so it show its activity like antibacterial, antifertility, antiprotozoal,

		<i>Deepana, Pachana, Anuloman, Agnimandya, Ajeerna, Vibandh, Krimi, Kushtha, Prameha nashaka.</i> <sup>[36]</sup>	constipation, sore throat, antifungal, pneumonia, obesity, analgesic, anti-inflammatory, antioxidant, anthelmintic, antidiabetic, anticonvulsant, anticancer, antihyperlipidemic, wound healing. <sup>[37,38]</sup>
8	<i>Kutaki (Picrorrhiza kurroae)</i>	<i>Guna- Ruksha, Laghu, Rasa- Tikta Vipaka – Katu Veerya- Sheeta Karma- Kapha-Pitta har Rochana, Deepana, Rechana, Pramehaghna, Pittasaraka, Aruchi, Agnimandya, Yakrut vikara, Vibandha, Aanaha, Udar Roga, Medadhikya.</i> <sup>[39]</sup>	<i>P. kurroa</i> regressed several features of NAFLD like lipid content of the liver tissue, morphological regression of fatty infiltration, hypolipidemic activity, and reduction of cholestasis. <sup>[40]</sup> The research work has revealed its Anti-obesity, Hypolipidemic, Cardioprotective, Anti-diabetic action, Hepatoprotective, Anti-cancer, Anti-oxidant, Anti-inflammatory and Immunomodulatory actions. <sup>[41]</sup> <i>P. kurroa</i> water extract significantly lowers AST, ALT, LDL, Tg and total cholesterol levels. <sup>[42]</sup>
9	<i>Haridra (Curcuma Longa)</i>	<i>Guna- Ruksha, Laghu Rasa- Tikta, Katu Vipaka- Katu Veerya- Ushna Karma- Kapha-Vatashamaka, Pitta shamaka also. Ruchivardhaka, Anulomana, Pittarechaka, Krimighna, Kaphaghna, Pramehaghna Jwaraghna due to Pitta shamaka &amp; Ama pachaka.</i> <sup>[43]</sup>	Anti-obesity effect of extract from fermented <i>Curcuma longa</i> L. through regulation of adipogenesis and lipolysis pathway in high-fat diet-induced obese rats. We found that FCE50 administration suppressed b.w. gain and reduced white adipose tissue weight, serum triglyceride (TG), and cholesterol in high-fat diet-induced obese rats. <sup>[44,45]</sup>
10	<i>Daru haridra – (Berberis aristate)</i>	<i>Guna- Laghu Ruksha Rasa- Tikta Kashaya Vipaka- katu Veerya- Ushna Karma -Deepana, Yakrit uttejaka, Pittasaraka,</i>	Researches shows <i>Berberis aristate</i> has Antidiabetic, antiobesity and antilipidemic activities. <sup>[47,48]</sup>



		<i>Agnimandya, Shothahar,</i> <sup>[46]</sup>	
11	<i>Patha</i> ( <i>Cissampelos periarra</i> )	<i>Guna- Laghu, Teekshna.</i> <i>Ras- Tikta</i> <i>Vipaka- Katu</i> <i>Veerya- Ushna</i> <i>Karma-Tridosh shamaka,</i> <i>Kaphapitta shamaka.</i> <i>Deepana, Pachana, Agnimandya,</i> <i>Ajeerna, Udarshoola,</i> <i>Hridroga.</i> <sup>[49]</sup>	Cissampelos species have a rich history of traditional use, being used for both therapeutic and toxic properties. It is traditionally applied therapeutically in a diverse range of conditions and diseases including asthma, cough, fever, arthritis, obesity, dysentery, snakebite, jaundice and heart, blood pressure and skin-related problems. <sup>[50]</sup>
12	<i>Shigru-</i> (Moranga olifera)	<i>Guna- Laghu, Ruksha, Teekshna</i> <i>Rasa- Katu, Tikta</i> <i>Vipaka- Katu</i> <i>Veerya- Ushna</i> <i>Karma-Kapha Vata shamaka</i> <i>Rochana, Deepana, Pachana,</i> <i>Krimighna, Lekhana, Shukra</i> <i>evam Meda nashaka.</i> <sup>[51]</sup>	Moringa Oleifera leaves are the most widely studied and they have shown to be beneficial in several chronic conditions, including hypercholesterolemia, high blood pressure, diabetes, insulin resistance, non-alcoholic liver disease, cancer and overall inflammation. <sup>[52]</sup> Ethanol extract of Moringa oleifera shows experimental evidence of anti-obesity effect. <sup>[53]</sup>
13	<i>Kantkari-</i> ( <i>Solanum Surattense</i> )	<i>Guna- Laghu, Ruksha, Teekshna</i> <i>Rasa- Tikta- Katu</i> <i>Vipaka- katu, Veerya – Ushna</i> <i>Karma-Kapha Vata shamaka</i> <i>Deepana, Pachana, Rechana,</i> <i>Vibandhanashaka, Ashmari,</i> <i>Puyameha, Meda nashaka.</i> <sup>[54]</sup>	<i>Solanum Surattense</i> shows various Pharmacognstic activities in researches like antimicrobial, anihelmenthic, antihyperglycemic, hypolipidemic, cardiovascular protective effect, antiulcer, wound healing, uriolithiatic, and antifertility etc. <sup>[55]</sup>
14	<i>Brahti</i> ( <i>Solanum Indicum</i> )	<i>Guna- Laghu, Ruksha, Teekshna</i> <i>Rasa- katu, Tikta</i> <i>Vipaka- Katu</i> <i>Veerya- Ushna</i> <i>Karma-Kapha Vata shamaka</i> <i>Agnimandya, Grahani, Udara</i> <i>Roga, Aruchi, Hridya,</i> <i>Shothahar, Raktaj vikara.</i> <sup>[56]</sup>	<i>Solanum Indicum</i> eliminates <i>Amadosha,</i> <i>Agnimandya, Aruchi,</i> effective in Chardi, Heart diseases, Hiccup, Fever, Worm infestation / Helminthiasis, Cough, Leprosy/ diseases of skin),

			eye diseases, Rhinitis, Hoarseness, Asthma & Pain. <sup>[57]</sup> Aqueous extract of <i>S. indicum</i> fruits possess significant anti-obesity potential on high fat diet induce obese rat. <sup>[58]</sup>
15	<i>Shalparni</i> ( <i>Desmodum Gangeticum</i> )	<i>Guna-Guru, Snigdha</i> <i>Ras- Madhur, Tikta</i> <i>Vipaka- Madhur</i> <i>Veerya- Ushna</i> <i>Karma-Tridosha shamaka.</i> <i>Deepan, Snehana, Anulomana,</i> <i>Hridya, Agnimandya,</i> <i>Koshthavata, Arsha, Prameha,</i> <i>Kapha nihsaraka, Vrishya.</i> <sup>[59]</sup>	Primarily possesses good antioxidant properties, which facilitates its action as an anti-inflammatory, analgesic, anti-nociceptive, cardioprotective, anti-amnesic, antidiabetic, gastroprotective and antimicrobial. suitable formulation for the treatment of the wide range of lifestyle diseases. <sup>[60]</sup>
16	<i>Shudh Hingu</i> ( <i>Ferula asafoetida</i> )	<i>Guna:Laghu,Snigdha,Tikshna</i> <i>Rasa- Katu, Vipaka- Katu</i> <i>Veerya- Ushna</i> <i>Karma-Kaphavata shamak, Pitta</i> <i>vardhaka</i> <i>Deepana, Pachana, Rochana,</i> <i>Anulomana, Vibandhanashaka,</i> <i>Hridroga, Hritshoola, Gulma,</i> <i>Udar Roga.</i> <sup>[61]</sup>	<i>Ferula asafoetida</i> is used as a digestive aid, in food. <i>Asafoetida</i> has been held in great esteem among indigenous medicines, particularly in Unani system from the earliest times. reduce the serum cholesterol levels. <sup>[62]</sup>
17	<i>Kebukmoola</i> ( <i>Costus speciosus</i> )	<i>Guna- Laghu, Ruksha,</i> <i>Ras- Tikta, Kashaya</i> <i>Vipaka- Katu, Veerya- Ushna</i> <i>Karma-Kapha Pitta shamaka,</i> <i>Vata vardhak Deepan, Pachana,</i> <i>Grahi, Hridya, Medohar,</i> <i>Pramehaghna, Kushtha,</i> <i>Santarpanjanya Vyadhi.</i> <sup>[63]</sup>	Researches shows <i>C. speciosus</i> extract has potential anti-obesity effects by inhibit the cholesterol and TG that led adipogenesis in HepG2 cells. However, in vivo test in an animal model still needed to confirm the anti-obesity activity of the extract. <sup>[64]</sup>
18	<i>Dhanyaka</i> ( <i>Coriandrum Sativum</i> )	<i>Guna- Laghu, Snigdha</i> <i>Rasa- Kashaya, Tikta, Madhur,</i> <i>Katu</i> <i>Vipaka- Madhur</i> <i>Veerya- Ushna</i> <i>Karma- Tridosha shamaka</i> <i>Kaphaghna, Deepana, Pachana,</i> <i>Rochana, graahi, Aruchi,</i> <i>Vamana, Agnimaandya, Ajeerna,</i> <i>Atisara, Sroto Vishodhaka.</i> <sup>[65]</sup>	Effect of coriander seeds on the metabolism of lipids was studied in rats, fed with high fat diet and added cholesterol & results shows that seeds had a significant hypolipidemic action. <sup>[66]</sup> <i>Coriandrum sativum</i> can be consumed daily for preventing hyperlipidaemia

			over the currently prescribed pitavastatin and atorvastatin, where these phytoconstituents are free from any side/adverse effects. <sup>[67]</sup>
19	Ajamoda Carum Roxburghinum :	<i>Guna- Laghu, Ruksha, Tikshna Rasa- Katu, Tikta Vipaka- Katu, Veerya- Ushna Karma- Kaphavata shamaka, Pitta Vardhaka, Deepana, Pachana, Vatanulomana, Agnimaandya, Aadhmana, Udarashoola, Hridya, Shool prashaman.</i> <sup>[68]</sup>	Researches indicate that Carum roxburghianum possess combination of antidiarrheal, antispasmodic and broncho-dilatory effects, which provides pharmacological basis to its traditional use in the disorders of gut and airways hyperactivity, like diarrhoea, colic and asthma. <sup>[69]</sup>
20	Chitraka (Plumbago Zeylanica)	<i>Guna- Laghu, Ruksha, Teekshna Ras- Katu Vipaka- Katu Veerya- Ushna Karma- Lekhana, Deepan, Pacha, Pitta Saraka, Agnimandya, Ajeerna, Udarashoola, Arsha,</i> <sup>[70]</sup>	Chitrak has been reported in improving nutritional status and related indicators in overweight and obese Women. <sup>[71]</sup> root and bark of P. Zeylanica is used to treat obesity. Various pharmacological findings has indicated that P. zeylanica extract has antimicrobial, antifungal, anti-inflammatory, antihyperglycemic, hypolipidaemic and antiatherosclerotic activities. <sup>[72]</sup>
21	Shweta Jeera- Curminum cyminum	<i>Guna- Laghu, Ruksha Rasa- Katu Vipaka- Katu Veerya- Ushna Karma- Kapha-Vatahara Param Deepana, Aruchi, Vamana, Agnimaandya, Ajeerna, Aadhmana, Udarashool, Grahni, Arsh, Hridroga etc.</i> <sup>[73]</sup>	Arq zeera and its main components possessed potent antiobesity effect on high fat diet -induced obese rats and excreted anti-obesity effect partly via hypolipidemic, hypoglycemic, hypoinsulinemic, hypoleptinemic and pancreatic lipase inhibition action. <sup>[74]</sup> Aqueous extract of C. cyminum has reduced risk factors associated with

			atherosclerosis, including high levels of cholesterol in plasma and had preventive effects on the body weight reduction in diabetic rats. <sup>[75]</sup>
22	Hapusa Hapusa- Juniperus Communis	<i>Guna- Laghu, Ruksha, Teekshna, Ras- Katu, Tikta, Vipaka- Katu Veerya- Ushna Karma- Kapha Vata shamaka Lekhana, Shothhar, Deepana, Pachana, Anulomaka, Kapha Nihsaraka, Agnimandya, Udar Shoola, Gulma, Arsha, Grahni, Jeerna Puyameh.</i> <sup>[76]</sup>	Antioxidant and Hepatoprotective Potential of Phenol-Rich Fraction of <i>Juniperus communis</i> Linn. <sup>[77]</sup> Recent studies have also found anti-inflammatory, cytotoxic, hypoglycemic and hypolipidemic effects of berries in experimental models. <sup>[78]</sup>
23	Atis Aconitum Hetrophyllum	<i>Guna- Laghu, Ruksha Rasa- Tikta, Katu Vipaka- Katu Veerya- Ushna Karma- Tridosha shamaka, Deepana, Pachana, Aamapachana, Lekhana, Medo Roga. Agnimandya, Ajeerna, Arsha, Atisara.</i> <sup>[79]</sup>	Pharmacological evaluations on the plant include antipyretic, analgesic, antifungal, antimicrobial, insecticidal, brime shrimp cytotoxic, antiviral, hypolipidemic, antidiabetic and immunostimulant activities and is used to treat diseases of nervous system, digestive system, rheumatism and fever. The alkaloids mesaconitine and 3 acetylaconitine have been reported for their potential anti-inflammatory activity. <sup>[80]</sup>
24	Sorvachal Lavana -Unaqua Sodium Chloride	<i>Guna- Laghu, Vishada, Sukshma, Snigdha Rasa-Lavana Veerya- Usna Vipaka- Katu Karma-Vatahara, Vishada, Ruchikar, Shoolprashaman, Anaahhar, Krimighna, Ajeerna, Deepana.</i> <sup>[81]</sup>	Stomach problems. carminative, stimulant, anti-flatulent and ant emetic and hence consumed after meal to aid the digestion. Useful in Goitre. <sup>[82]</sup>
25	Madhu	<i>Guna- Guru, Ruksha Rasa-Kashaya, Madhura Veerya- Ushna Vipaka- Katu Kapha Vatahar</i>	“Guru & Aptarpana” drug. Due to its heaviness quality <sup>[83]</sup> , it digests lately, as a result, the obese person does not feel hunger quickly and due to its <i>Aptarpana</i> action, <sup>[84].</sup> <sup>[85]</sup> it reduces

			fat <sup>[86],[87],[88],[89]</sup>
26	<i>Til Taila</i>	<i>Guna- Guru, Snigdha, Ushna, Sukshma, Vyavayi Rasa-Madhura, Anurasa-Kashaya Veerya- Ushna Vipaka-Madhur Kapha Vatahar</i>	Sessam oil research shows promise in decreasing high levels of cholesterol and inflammation, lowering risks of atherosclerosis, and delaying the onset of cardiovascular diseases. <sup>[90]</sup>
27	<i>Go-Ghrita</i>	<i>Guna- Snigdha, Guru, shita, Mridu Rasa- Madhura Veerya- Sheeta Vipaka- Madhur Vata-Pitta shamaka</i>	The main reason behind this is the molecular structure of the blood brain barrier. This membrane separating the CNS tissue and the circulating blood is lipophilic in nature. Thus it selectively allows the passage of lipids and lipid soluble drugs across it. Therefore any drug given in the form of go ghrita will not only be digested and absorbed fast, but will also be able to reach some of the most distant and difficult to reach areas of body like the CNS. <sup>[91]</sup>
28	<i>Yava (Hordeum vulgare)</i>	<i>Rasa- Kashaya, Madhura Guna- Rukshna, Guru, Pichchhila, Mridu Veerya- Seeta Vipaka- Katu Dosha karma- Kapha-Pitta shamaka Medonashaka, Kriminashaka, Vishanashaka, Lekhana.<sup>[92]</sup></i>	<i>Yava</i> (Hordeum vulgare) is a supplementary diet for which wide references were found in classics as preventive and curative aspects of medoroga. It was evident by the significant changes in the subjective and objective parameters. <sup>[83,94]</sup>

**Vyoshadi Saktu:** On review it is also found that A clinical study conducted at National Institute of Ayurveda Jaipur on small sample size has been already conducted on *Vyoshadi Saktu* which shows significant results by reducing obesity in various subjective and objective assessment criteria of the trial.<sup>[95]</sup>

## DISCUSSION

From above review it is clear that As *Sthaulya* itself is a *Santarpanottha Vyadhi* and as *Kastasadhya*, So *Ayurveda* emphasizes that the successful management of any disease is not

only depends upon the proper *Aushadi* and *Vihara* but also depends on proper *Ahara* or *Pana* in the form of *Guru* and *Apatarpana* as explained in *Samhitas* in broadly. One should be informed that consuming foods high in water and fibre (fruits vegetables, legumes and soups) can provide satiety without excess calories.<sup>[96]</sup>

### **Mode of Action**

The *Vyoshadi Saktu* contains 28 drugs. Majority of these drugs are *Katu*, *Tikta*, *Kashaya Rasa Pradhana* with predominance of *Laghu*, *Ruksha*, *Teekshna* and *Ushna Gunas*. Most of the drugs poses *Usna Virya* with *Katu Vipaka*. While reviewing the pharmaco-therapeutic actions of these drugs most of the components of *Vyoshadi Saktu* have *Kapha-Vatahara*, *Tridoshahara*, *Deepana*, *Pachana*, *Anulomana*, *Lekhana*, *Bhedana*, *Chedana* and *Medohar* activities. Majority of drugs also have *Srotovishodhaka*, *Balya* and *Vrishya* activities.<sup>[97]</sup>

In *Vyoshadi Saktu* maximum part is *Yava Saktu* which is *Sheeta Veerya*, appetizer, light to digest, laxative. It pacifies *Kapha* and *Pitta*, also depletes fats. If the *Saktu* is dissolved in water and drunk, it gives strength, enhances semen, nourishes body, expels hardened faeces, satisfies, sweet in taste, promotes taste and yields energy on digestion. It relieves aggravated *Kapha* and *Pitta*, alleviates fatigue due to walking and exercises. *Madhu* due to its *Guru*, *Ruksha Guna*, *Kashaya*, *Madhura Rasa*, *Ushna Veerya* & *Katu Vipaka* shows *Vata Kaphhara* Properties and can be used as “*Guru & Apatarpana*” drug. *Til taila* also posses all most similar properties including *Sukshma* & *Vyavayi* property also included in a major portion.

According to various clinical researches and experimental studies it has been noted that most of the drugs reported Anti-lipidemic, Hypolipidemic, Anti-obesity, Anti-hyperglycemic, Anti-diabetic, Anti-atherosclerotic, Cardioprotective properties which are beneficial in treatment of *Sthaulya* or obesity.

### **CONCLUSION**

It can be concluded that *Vyoshadi Saktu* with these pharmacotherapeutic properties is likely to break down the *samprapti* of *Sthaulya* Roga and check its progress without producing weakness in the body. The *Vyoshadi Saktu* can be recommended as diet as well as remedy in obese people. Further clinical trial also can validate this review.

**Source:** Nil.



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