

## STRESS FACTORS EXPLAINED IN AYURVED INVOLVED IN GENETIC MUTATION AND ALTERATION

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### ABSTRACT

Stress caused by exposing to environmental conditions like heat and cold is an overpowering phenomenon that affects the normal functions of individual life. These Stress produces a dimensional change and induces a strain as per physical metabolical and genetical aspects. Advances in stress factors research have yielded new insights into how stress factors, in combination with genetics, can contribute to Good and poor health outcomes. Human development has demonstrated lasting effects of stress from prenatal development through old age. A team from Geneva university has already carried research where they analysed temperature changes in mice where they show significant modulations in gene expressions. In Ayurved not only heat and cold has been explained but other eighteen other stress factors has been explained, study of those eighteen stress factors are definitely going to help the other reasonable changes occurring in the physical and genetical changes in human beings and other organisms. Those other stress factors are termed as gunn and those are.....Guru Mand Him Snigdhd shlakshnn sandr mrudu sthirah gunnah sa Sukshma vishadah sa viparyaya.

**KEYWORDS:** These Stress produces a dimensional change and induces a strain as per physical metabolical and genetical aspects.

### INTRODUCTION

Exposure to stress factors can modify DNA methylation, which may alter gene expression and therefore contribute to disease phenotypes. Early-life stress, such as childhood abuse and stress-related disorders, have lasting effects on methylation that may persist into adulthood. Studies have shown that this stress can have long-lasting impacts on the physical and emotional health of the offspring. However, the mechanisms of this transfer have remained mysterious.

Psychological signs such as difficulty concentrating, worrying, anxiety, and trouble remembering. Emotional signs such as being angry, irritated, moody or frustrated. Physical signs such as high blood pressure, changes in weight, frequent colds or infections, and changes in the menstrual cycle and libido are the common stress traits.

### MATERIALS AND METHODOLOGY

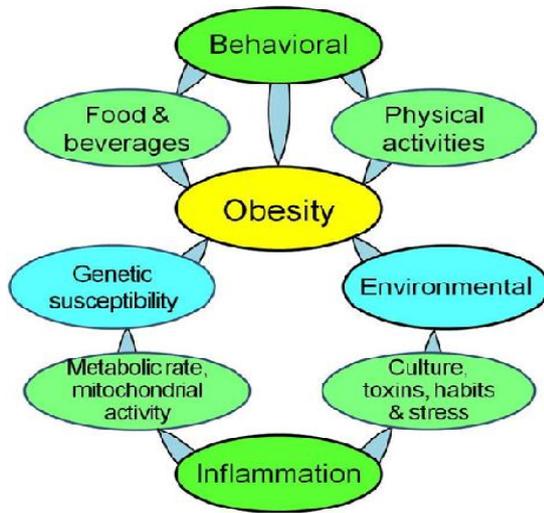
The stress factors overpowering the genetic makeup and the genetic variations from generation to generation are as follows.

1) Guru(Heavy): सादोपलेपबलकृद् गुरुस्तर्पणबृहणः । - सु. सू. ४६  
गुरु यस्य द्रव्यस्य बृहणे कर्मणि शक्तिः स गुरु ।

गुरुत्वात् साराधिष्ठितावस्थि- तगतयः+

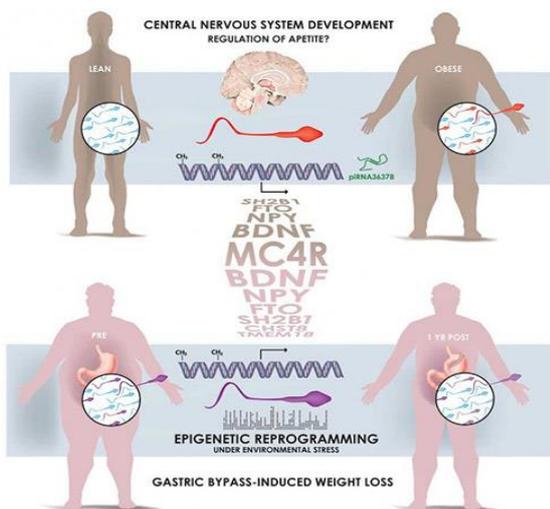
Since 2002, rapid advances in genetic research have been successful in identifying genetic factors associated with various traits and diseases. Although many genes have been identified to be associated with obesity and body fat distribution, there is a growing consensus that the genetic variants with modest effects discovered do not account for a large proportion of estimated heritability of obesity and body fat distribution. Such missing heritability may at least partly be explained by the gene-environment interaction. The increasing body of studies on gene-environment interactions relation to obesity lends great support to hypothesis above. In addition, the recent emerged studies, such as metabolomics and microbiome, are generating novel data regarding other non-genetic factors affecting the development of obesity and body fat distribution. The purpose of the current review is to summarize the recent findings of gene-environment interactions in relation to obesity and body fat distribution from observational studies and randomized clinical trials. Guru gunn as a stress factor is that when a person is continuously taking heavy food which are heavy to digest so continuously being of such food it will generate a type of stress factor which is not similar to normal proportionate diet. it will hamper the cellular

metabolism resulting abnormal protein fat carbohydrate metabolism which will ultimately produce abnormal form of tissue building substances and will bring changes in the phenotype conditions.



2) Laghu(lightness): लघु - व्याख्या - लघने लघु:।  
लघुत्वात्लघुत्वपलगतित्वेष्टाहारव्याहारा

Lightness due to malnourishment, opposite of Guru, it can even understood by factor deficiency of nutritions in term of Vitamins and minerals scarcity of which is very well explained in modern medicines, in the body is one among the stress traits carried from the parents to the offspring, in the body lightness creates if in proportionate helps to develop good cellular metabolism but as a stress it will create cellular destruction. It is the opposite of heaviness. Lightness improves oxygen levels and creativity. Lightness can also mean a lack of appropriate seriousness. Mental lightness can create ungroundedness, and distraction. Pathological lightness creates emaciation and weakness.



3) Manda(Slowness): मंद - व्याख्या- यस्य शमने शक्तिः स मंदः।  
मन्दत्वान्मन्दवैष्टाहार- व्याहाराः  
लघुस्तदविपरीतः स्याद् लेखनी रोपणस्तथा ॥ सु. सू. ४६  
मंदो यात्राकारः स्मृतः । सुश्रुत

Slowness and sharpness qualities are mutually antagonists and balancing qualities. Slowness is defined on the basis of the slow activities with which things work. Slowness quality increases the tissues and makes the body bulky and stout. Since slowness increases kapha, the kapha being nurturing in nature enables tissue build up. The quality and quantity of tissues increase on administration of dullness quality and subsequent increase of kapha. Though dullness is predominant in earth and water elements and by nature it should produce gravity enabling easy excretion of excreta, it doesn't contribute to easy elimination. This is owing to its slow nature. Since the process is slow, excretion of waste products of the body seems difficult and time taking. Dullness is observed in animals like Sloth, Tortoise, and it has been observed that to store energy used for metabolism these creatures have adapted slowness or dullness.

4) Tikshna (Sharpness): तीक्ष्ण - व्याख्या यस्य शोधने शक्तिः स तीक्ष्णः ।

तीक्ष्ण्यतीक्ष्णपर्यक्रमः तीक्ष्णान्नयः प्रभूताशनपानाः क्लेशा- सहिष्णवो, दन्दशूकाः द्रवत्वाच्छथिल मृदुसन्धिमासाः प्रभूतसृष्टस्वेदमूत्र- पुरीषाश्च दाहपाककरः तीक्ष्णो स्रावणश्च विशेषतः ॥

Sharpness is defined on the basis of the piercing capacity and intensiveness with which things work and on the ability of things to cause cleansing and expulsion of materials in the body. Similarly, heat is also destructive but Tikshna will have the piercing capacity though it is not always ushnn(hot) in the environment, aggressive nature and anger will increase pitta and hence the sharpness quality. The increased sharpness and pitta would destroy the sliminess and destroy the cell structure. Sharpness is thus opposite and antagonistic to kapha and stickiness quality.

5) Hima(coldness): शीत - व्याख्या - स्तम्भने हिमः।

शीत्याच्छीतार्साहृष्णवः प्रतशीतकोद्वेपकस्तम्भाः

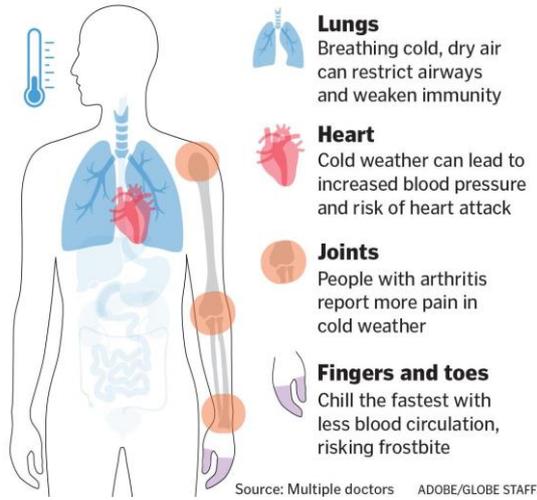
शीत्यादल्पचतृष्णासंतापस्वेददोषाः

ल्लादनः स्तम्भनः शीतो मूच्छातृटस्वेदाहजित् ।

Stambhane Sheet that means the property which will cause stiffness is due to hima or shitta gunn, Forstbite is a common term used to define skin injuries due to exposure of extreme cold. Exposure to extreme cold will destroy the cells like forst bite, it will utilise its heat energy more and thus leads to hypothermic condition. Cold stress lead to serious conditions such as hypothermia, frostbite, and trench foot. Include fatigue confusion, disorientation and later stages, the skin turns blue pupils dilates, the pulse and breathing slows and unconsciousness and coma may follow.

## How the cold affects your body

Experts say subzero temperatures can lead to a rapid onset of negative health effects.



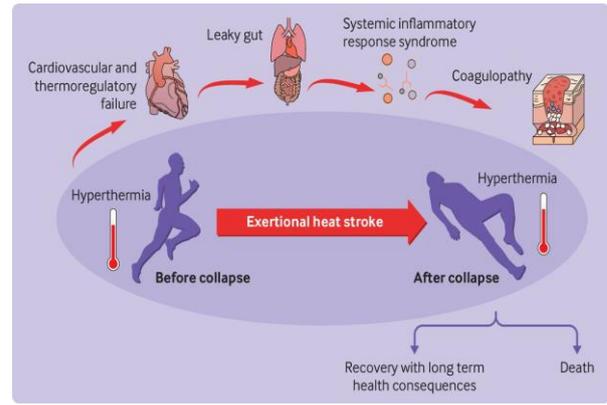
### 6) Ushna(Hot): उष्ण - व्याख्या - स्वेदने उष्णः।

तस्यौष्ण्यात् पितला भवन्त्युष्णासहा  
उष्णस्तदविपरीतः स्यात् पाचनश्च विशेषतः ॥ सु.सू. ४६

Heat stress triggers a range of adaptive physiological and cellular mechanisms, including thermoregulation and the cellular response to stress particularly the induction of heat shock proteins to prevent hyperthermia, cellular damage and death. It is currently believed that cardiovascular stress, due to thermoregulation, underlies the adaptive response to heat stress. Increase in cardiac output is needed to accelerate the transport of heat to the skin, and then to the environment, and this may progress to cardiovascular failure and death. At the cellular level, cytotoxicity is caused by heat.

Transcriptomics have emerged as a powerful approach for investigating the molecular response to environmental heat.

Genes involved in growth related processes are suppressed. Energy resources are redirected to stress related functions to allow cells to survive the changing environmental stress. A general stress response common to most cells was characterized and found to include the identification and repair of misfolded or aggregated proteins or their transport to sites of degradation, cell cycle control to allow stabilization and repair of altered DNA and chromatin, and regulation of energy metabolism and redox state of the cells.



### 7) Snigdha(unctuous): स्निग्ध - व्याख्या - यस्य क्लेदने शक्तिः स स्निग्धः ।

तस्य स्नेहाच्छ्रेष्मलाः स्निग्धाङ्गाः  
स्नेहमार्दवकृतस्निग्धोबलवर्णकरस्तथा ।

That which brings about oiliness, softness and wetness in the body is called snigdha guna. Unctuousness is the special quality of water element. Therefore snigdha quality is defined on terms of its capacity to induce wetness in the tissues and body.

The property of water to produce wetness is also present in the unctuous quality. Just as water acts as binding substance between two materials and makes the dry things wet, unctuous quality too binds the cells and tissues and removes dryness in them due to hyperactivity of vata. Increased dryness causes depletion of tissues which leads to degeneration, increase in vata and many diseases caused due to increased vata. Most musculoskeletal and neuromuscular diseases are effectively treated by administration of unctuous substances.

### 8) Ruksha(Dryness): रूक्षः - व्याख्या - यस्य शोषणे शक्तिः स रूक्षः ।

तस्य रौक्ष्याद्वातला रूक्षापचिताल्पशरीराः  
प्रतररूक्षकामसन्नसक्त जर्जरस्वरा जागरूकाश्च भवन्ति  
रूक्षस्तदविपरीतः स्याद् विशेषात् स्तंभनः स्वरः ॥

Natural dryness is the quality of vata dosha in the body. Vata is antagonistic to kapha, fat and unctuousness. Vata and kapha are mutually balancing in nature. If kapha increases in the body, the unctuousness too increases. Unctuousness is one of the qualities of pitta also. The increased vata and dryness will combat excess unctuousness in the body and put it into balance. Excessive dryness will totally deplete the unctuousness of the tissues and make the body dry and susceptible to many diseases. Our strength, immunity and colour also depends on the qualitative and quantitative balance of essence of all tissues i.e. ojas. Since dryness destroys the tissues, the ojas which determines all good features in us also is not formed properly making us susceptible to various diseases. Ojas, rasa tissue and most tissues are rich in wetness and unctuousness.



9) Shlakshna (smoothness): श्लक्ष्ण - व्याख्या यस्य रोपणे शक्तिः स श्लक्ष्णः।

श्लक्ष्णः स्नेहं विनाऽपि स्यात् कठिनो अपि हि विवकणः।

लक्षणत्वाच्छुष्काङ्गाः।

Smoothness is responsible for integrity of tissues and enables compactness of structures. Smoothness helps in healing damaged and worn out tissues. It also prevents damage of tissues and body components and is thus responsible for stability and endurance of body. It removes excessive dryness and roughness from body. So smoothness as a stress factor definitely going to effect the integrity of the tissues and the compactness of structure it will fill increase the flaccidity in tissue structure, which will ultimately causes prameh like condition. so it will again hamper the quality of other cellular metabolism.

10) Khara (Roughness): खर (सुश्रुत मते कर्कश) व्याख्या - यस्य लेखने शक्तिः स खरः।

कर्कशो विशदो यथा क्लेदावृषणरोपणः ॥ भा. प्र.

पारुष्यात् परुषकेशश्मश्रु- रोमनखदशन वदनपाणिपादाः

Inside the body roughness can be known through its action, i.e. its ability to cause roughness, scrap and deplete tissues, increase vata and vata symptoms including dryness, roughness of the body parts and degeneration. Roughness cause scaling of the tissue so kharta as stress factor practicing eating food which have tendency to form scaling can destruct the cell structure even in ova and sperm and can produce genetical conditions, scaling is either a tendency or caused by some fungal infection like psoriasis or seborrheic dermatitis where though the skin is oily but the texture is rough, so rough and dry both are different entities.

11) Sandra (Solidity): सांद्र - व्याख्या यस्य प्रसादने शक्तिः स सांद्रः। सान्द्रत्वाद्गुणवतिपरिपूर्णसर्वाङ्गाः।

The attribute which will add mass inside the body and coming in contact with tissues and organs it act as additive and increases the mass of the body which ultimately increases the weight of the body. Solidity is predominantly formed from earth element. Kapha dosha is made up of earth element. Therefore, solidity which is made up of and dependant on the earth element also increases kapha dosha in the body. Solidity quality increases kapha and also mitigates vata. Since kapha is made up of earth element, it naturally carries the solidity in comparison to the other doshas of the body. Thus, kapha induces solidity in the body. Anything which increases solidity in the body also increases kapha. Similarly, anything which increases kapha also increases solidity.

Solidity increases the tissues in a healthy way and restores their balance. Since Sandra provides stability, the tissues get stable and strong and in turn support the anatomical structure of the body. Solidity also restores and replenishes the tissues which have undergone destruction and damage owing to the increase in vata. Solidity also counteracts the hyperactivity of vata and thus prevents further destruction of tissues. but as a stress factor it adds bulkiness in the body and can cause blockage in various srotas. Resulting in deformation of par par dhatu which will weaken the beej in human body. the vikruti in sandr gunn can increase the tendency of plaque formation in the body.

12) Drava (Fluidity): द्रव - व्याख्या यस्य विलोडने शक्तिः स द्रवः। द्रवत्वाच्छिथिल मृदुसन्धिमांसाः प्रभूतसृष्टस्वेदमूत्र- पुरीषाश्च

The attribute which is subtle and perforate everywhere and in everything is called drava guna i.e. liquidity quality. That which is responsible for flow of things is called liquidity or is said to possess liquidity quality. Liquidity is predominantly formed from water element. The water element too has liquidity quality in it.

Liquidity quality increases kapha and pitta and mitigates vata. Since kapha and pitta, both have water elements as a part of their composition, they naturally carry liquidity quality with them. Thus, kapha and pitta induce liquidity in the body.

Like solidity, liquidity also increases the tissues in a healthy way when it is in a state of balance. Liquidity mainly increases the liquid tissues of the body. They include lymph, blood and semen tissues. Among these, the lymph and blood are very essential for smooth running of all the body activities, they are nutritive and enlivening for tissues and organs. They are also responsible for formation of other tissues and keeping them in balance.

Liquidity, in a state of balance will keep vata under control and doesn't allow its hyperactivity. Thus, it prevents destruction of tissues which could likely be

caused by increased vata. This also can be attributed to the kapha and pitta increasing tendency of liquidity quality, kapha being antagonistic and vata mitigating in nature. when drava gunn is consider as strss factor we have to consider two things the drava gunn increases because of pitta and agni that ushnnata, and the drav gunn increases because of water contain or bahu drav awastha due to abadhtta in both the condition, if the pitta gunn will aggravate it will bring, raktpitta upadrav janyya vicar in beej and if dravansh due to water contain will increase it will bring abadhtaa in beej, consiquences will be like pramehha.

13) Mrudu (softness): मृदू - व्याख्या - श्लथने मृदुः ।  
मृदूत्वाद्दृष्टिसु- खसुकुमायवदातगानाः

That which produces softness and looseness of body parts is mrudu guna i.e. softness quality. Softness quality is related to water and space elements. Therefore softness quality is formed by the combination of water and ether elements. Softness quality increases kapha and mitigates vata and pitta doshas. Kapha naturally has softness quality. Kapha induces softness and anything which increases softness increases kapha.

The contraction and relaxation of muscles doesn't take place easily and many functions of skeleton and visceral organs are hampered. In such conditions softness should be induced in body by administration of foods, activities, medicines and therapies which has softness quality in them.

Laxity and looseness of tissues is associated with softness. When this quality is in a state of balance, tissues are good and healthy. When this quality increases, it creates excessive laxity and looseness of tissues. Softness makes excreta loose. This makes excretion easy. Softness quality can be used to nullify ill-effects of excessive hardness in the body parts and induces softness. softness as stress factor can cause Rickets in children and osteomalacia in adults can be genetic or acquired, the acquired condition if remains untreated then it can cause genetical changes in beej where the offsprings will suffer oeteomylesia type genetic condition.

14) kathina (Hardness): कठीण - व्याख्या यस्य दृढीकरणे शक्तिः स कठिनः ।

Those which give a feel of hardness and toughness on touch and are stable in nature are called kathina or are said to have hardness quality. Hardness quality is related to earth element. Therefore, hardness quality is formed by presence and predominance of earth element in any substance.

Hardness quality increases vata and mitigates kapha. Vata naturally has hardness as one of its qualities. Vata induces hardness in body owing to hardness quality it has. Likewise, anything which increases vata increases hardness. Anything which increases hardness also increases vata.

Hardness quality make tissues hard, stiff. Stiffness is a quality of hardness. When this quality is in a state of balance, tissues do not lose the minimum hardness which is needed for them to be stable and supportive. But when this quality increases, soft tissues lose their softness and flexibility and cause serious problems. hardness as stress can create scleroderma like situation or muscular stiffness bamboospine all sort of disorder where over production of collagens are there so it will definitely goin damages tissues. And thus, damaging the beej and the hardness condition will definitely be going to carry forward through beej dosha,

15) Sthira (Stable): स्थिर - व्याख्या - यस्य धारणे शक्तिः स स्थिरः ।

Immobility is defined on basis of capability of things having that quality to produce stability in the components of the body. Immobility is a quality which can be known by the virtue of its action. The quality which has the capacity and strength to hold things back, i.e. capacity to bring about retention of things is called sthira guna i.e. stability quality.

Examples of body components which have immobility quality and hence stable are hairs, moustache, body hairs, bones, nails, teeth, veins, nerves, ligaments, tendons, arteries and semen.

Stability is the quality of earth element. All things which are solid are made up predominantly of earth element. We would see that the solid materials are in a state of rest, stable unless mobilised by outward pressure or force. Stability quality increases the tissues. Since it increases the tissues, this quality also bestows strength, endurance and immunity in the body. As already said immobility increases kapha. Kapha when in a state of balance is said to be bala. Bala means strength or tolerance power. Since immobility increases kapha, the strength is naturally increased or restored. We also should remember that kapha is responsible for integrity and binding the body components. Majority of body tissues also belong to kapha group.

It causes retention of doshas inside the body, constipation, retention of urination, dysurea, loss of perspiration, retention of heat inside the body, disorders of large intestine, urinary tract and skin, while it may also cause constipation. This quality can be used to stop or arrest anything put into flow. It is also used to treat those conditions wherein the body is losing its important life sustaining components as happens in loss of body water in diarrhoea and blood in haemorrhage. Immobility causes stoppage of things in motion establishes their stability in the body.

16) Sara (mobile): सर व्याख्या - यस्य प्रेरणे शक्तिः स सरः ।

The attribute which has capacity and strength to put things in motion, to mobilize and expel things is called sara guna. Mobility or instability quality is related to water and air element. It is a quality of water element. Water element has mobilizing quality. But on the virtue

of its actions it seems that this quality is rich in vata i.e. air element. Hence, mobility quality either acts through the predominant element it contains i.e. water element.

When things are stagnant and when they are flushed with adequate water, they are drained and the congestion clears.

Mobility quality increases vata in the body. Since it increases vata, vata which is basically responsible for mobilization and expulsion of excreta of the body. Mobility quality of vata when in a state of balance is also responsible for menstruation and ejaculation. Mobility quality is basically lekhana in action i.e. it is scraping in nature. It scrapes off tissues of the body and destroys them. When tissues get destroyed, vata further increases and expels even the life supporting components of the body. This leads to loss of strength and stability of the body. Make body susceptible for manifestation of diseases.

Mobility quality enables easy excretion of waste materials of the body. When this is in a state of balance, the body will be healthy since its impurities are expelled regularly and effortlessly. But when mobility quality increases beyond permissible limits in the body, it causes excessive expulsion of excreta, watery components and all the life-supporting and sustaining components of the body.

17) Sukshma (Minuteness): सूक्ष्म - व्याख्या - यस्य विवरणे शक्तिः स सूक्ष्मः ।

देहस्य सूक्ष्मच्छिद्रेषु विशेद् यत् सूक्ष्मं उच्यते ॥ - भा. प्र.

Fineness is a quality which cannot be perceived by eyes or touch. Its effects are seen in and out of the body. Actions of increased fineness can be perceived in the form of increased vata activities in the body. Inside the body fineness can be known through its action, i.e. its ability to destroy bulkiness, to open up channels of transportation and to clear the body of its congestion and stagnation, cause depletion of tissues. Fineness quality is mainly related to three elements i.e. Agni, Vayu and Akash elements, combination of air and space elements make up vata dosha. Therefore, fineness which is formed by and dependent on these elements also increase vata in body. Combination of these three elements in balanced proportions is very intense and quick acting. Vata naturally possesses fineness quality. Hence, vata induces fineness in the body. Anything which increases fineness also increases vata. Similarly anything which increases vata also increases fineness. Fineness quality depletes tissues. This happens when vata increases beyond limitations owing to increased fineness. When in a state of balance, fineness makes sure that excessive tissues are not formed and deposited; it keeps clearing unnecessary tissues. When abnormally increased and out of balance, fineness increases vata. This increased vata destroys tissues, even normal tissues.

18) sthula (Bulky): स्थूल - व्याख्या - यस्य संवरणे शक्तिः स स्थूलः ।  
स्थूलः स्थौल्यकरो देहे स्रोतसां अवरोधकृत ।

That which have capability and strength to produce obstruction and stagnation in channels and tissues of the body is called sthula guna i.e. bulkiness quality. Bulkiness quality is mainly related to earth element. Earth element too has bulkiness quality. Bulkiness quality increases kapha and mitigates vata. Kapha naturally tends to increase bulkiness quality. Thus, kapha induces bulkiness in the body. Anything which increases bulkiness in the body also increases kapha. Similarly anything which increases kapha also increases bulkiness.

Bulkiness quality increases tissues i.e. it builds up tissues in a healthy way. This is possible when bulkiness quality and kapha increased by that quality are in balanced proportions. When in a state of balance, bulkiness quality helps in forming tissues and keeps them in balanced proportions. Multiple obstructions and stagnation depletes tissues and organs of their nutrition and important life-sustaining components and also causes retention of wastes and toxins in the body. Eventually, following all these events, body becomes susceptible for many diseases. Bulkiness brings about heaviness and smoothness in excreta, mainly faeces and enables its easy expulsion. Bulkiness is used to increase tissues which have been damaged and destroyed by increased fineness and increased vata. Thus, bulkiness is used to treat thinness and emaciation caused by pathological increase of fineness and vata dosha.

19) Vishada (Clearance): विशद - व्याख्या यस्य क्षालने शक्तिः स विशदः ।

विशदो विपरीतो अस्मात् क्लेदाचूषणरोपणः ॥ सु. सू. ४६/१२४

वैशद्यात् स्फुटिताङ्गावयवाः सततसन्धिशब्द- गामिनश्च भवन्ति

Clearness quality increases vata and hence mitigates kapha. Clearness is one of the qualities of vata. Vata induces clearness in body leading to the clearness quality it has. Similarly, anything which increases vata increases clearness. Anything which increases clearness also increases vata.

Clearness quality scrapes tissues, sucks off excessive fluidity from tissues and enables healing of wounds. Destroying sliminess from tissue is the quality of clearness. While it is therapeutic in many conditions, this quality becomes harmful for tissues when it increases beyond limitations.

When there is excessive stagnation of fluids in tissues leading to build up of pressure within tissues and hampering smooth conduct of tissue functions then that fluid and deposit of excessive wastes and undesired tissue should be cleared. Foods and medicines having clearness quality clears the congestion in tissues and channels by clearing accumulation of fluid and scraping tissues.

Clearness makes the stools dry, devoid of liquidity and hard and thus helps in curing conditions like diarrhea etc

or in all conditions wherein there is excessive discharge of fluids in the form of excreta. Clearness also increases vata. Increased vata further dries up faeces.

Clearness also suck off excessive fluidity and congestion from tissues and channels. Clearness will also help in scraping off pile of unnecessary tissues, dead tissues and debris which are root causes for many diseases. These properties will also help in curing wounds in quick time.

20) Picchila(Stickiness): पिच्छिल - व्याख्या यस्य दृढीकरणे शक्तिः अपिच्छिलः।  
विजलत्वात् सुश्लिष्टसारसन्धि- बन्धनाः

Sliminess is that which causes coating in tissues and channels. Since sliminess enables things to get smeared in body channels and tissues it causes multiple blocks in several parts.

Sliminess causes stickiness and makes things to adhere to the walls of channels, organs and tissues thereby causing obstruction. Sliminess quality is related to water element. Therefore, sliminess quality is formed by predominance of water element in any substance. Not all substances having sliminess quality produce stickiness, but all those things which are slimy in nature and produce stickiness are rich in water elements.

It binds and brings integrity among the body components. Thus enhances tissues in a healthy way. It unifies broken and separated components and tissues of the body. By doing this, sliminess quality establishes strength and endurance in body.

Subsequently controlling vata, sliminess brings adherence of tissues and helps in tissue repair and cures damages caused by clearness and vitiated vata.

By inducing stickiness in channels of excretion and producing lubrication in excretory passages, enables easy excretion of waste products. Sliminess also adds softness of faeces. Sliminess unifies broken bones and other tissues and enables in treating fractures and tissue damage. Sliminess enables easy clearance of excreta. This quality controls vata and thus is helpful in treating high vata conditions.

## CONCLUSION

Genetics is widely dependent on the attributes found in ayurveda, that is the 20 attributes also called as gurvadi gunas. This gunas or attributes effect the genetic makeup of an individual. Research is validating the role of different factors that modify the epigenetic patterns. Several lifestyle factors such as diet, obesity, physical activity, tobacco smoking, alcohol consumption, environmental pollutants, psychological stress and working on the night vigile might modify epigenetic patterns. Epigenetic dysregulations including aberrant methylation, histone modification and microRNA alterations in cancer, as well as neurodegenerative, autoimmune, cardiovascular and other diseases have

been reported. Researchers have also found widespread seasonal gene expression differences in human immunity and physiology. It is interesting to note that a number of such have indicated that environmental stress can also promote epigenetic alterations that are transmitted to subsequent generations to induce pathologies.

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