



Research Article

EFFECT OF NIDRA ON MEDA DHATU WITH SPECIAL REFERENCE TO DIFFERENT DEHAPRAKRITI

Minal Patil^{1*}, Ravindra S. Dhimdhome², Yogesh Shevale³, Amruta Rajenimbalkar³

*1PG Scholar, ²Professor & HOD, ³Associate Professor, Department of Kriya Sharir, Government Ayurvedic College, Dharashiv, Maharashtra, India.

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ABSTRACT

According to Ayurveda, sleep is included in *Upastambha Traya*, *Adharaniya Vega* hence it sustains life. Getting enough *Nidra* helps in maintaining normal growth and development of the body. According to Ayurveda, improper sleep (*Nidra Viparyaya*) may cause some life style diseases (*Sthaulya*). So, it can be said that abnormal, inadequate *Nidra* can make a person *Atura* (diseased). Among the seven *Dhatus*, *Meda* with *Jala* and *Prithvi* as its dominant elements, is solid and soft. It is the storage site for excess fat in the body. Definition of *Swastha* also refers to the moderate quantity of the seven *Dhatus* of the body. Disorders may develop if there is variation in it. In this context, the excess accumulation of *Meda Dhatu* that is *Medo Vruddhi* results in overweight/obesity and decrease in *Meda Dhatu* that is *Meda Kshaya* results in underweight. *Nidra* has such inevitable effects on mind and body. In Ayurveda, Acharya Charak has stated in *Charak Sutrasthan*, *Adhyay 21/51* "Swapnahar Samutthe Cha Sthaulya Karshye Visheshatah" that means *Aahar* and *Nidra* are the main causes for *Sthaulya* and *Karshya*. Also, modern science has stated that sleep requirement is not constant but has to be taken as per the persons need. Therefore, to sum up, In, today's era, sleep is seen to be majorly disturbed which is one of the reasons for psychosomatic disorders. There is disturbed fat distribution observed in people surrounding us with no major co-morbidity but still showing symptoms related to *Meda Dhatu*. Therefore, to reveal the role of *Nidra* to cause the improper *Meda dhatu* distribution in body So, this study is being carried to explore the effect of *Nidra* on *Meda Dhatu* with special reference to different *Deha Prakriti*.

INTRODUCTION

Ayurveda is an ancient science with the purpose of maintaining health of healthy individual and curing disease of diseased. *Aahara* (food), *Nidra* (sleep) and *Bramhacharya* (abstinence) are illustrated as the three supportive pillars. Importance of *Nidra*, its role in maintenance of life is discussed. *Nidra* is also considered under *Adharniya Vega*.^[1] It has been rightly stated by Charak that happiness and misery, proper and improper growth, good strength and weakness, potency and sterility, knowledge and ignorance and life and demise of an individual depend upon

appropriate and inappropriate sleep. Hence, *Nidra* (sleep) is one of the important factors to lead a healthy life.^[2] Suppression of natural urge (*Adharniya Vega*) *Nidraa* may cause *Moha*, *Gaurava* of *Sirah* and *Akshi*, *Aalasya*, *Jrmbha* and *Angamarda*. *Nidraanasa* may cause *Angamarda*, *Sirogurutva*, *Jrmbha*, *Jaadya*, *Glaani*, *Bhrama*, *Apakti*, *Tandraa* and other *Rogas* caused by *Vaata Dosh*. Diseases caused due to *Adharniya Vega* have been categorized as *Prajnaparadha* because in pathogenesis of such diseases primary fault begins with psyche (*Prajna*) and later on somatic involvement occurs. Hence, these diseases may be recognized as psychosomatic diseases also and the situation leading to these diseases may be considered as stressful situations because in aetiology of psychosomatic diseases stress plays a major role.^[3]

Getting enough *Nidra* helps in maintaining normal growth and development of the body. According to Ayurveda, improper sleep (*Nidra*

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Viparyaya) may cause some life style diseases (*Sthaulya*). So, it can be said that abnormal, inadequate *Nidra* can make a person *Atura* (diseased). Ayurveda defines healthy individual as a state of physical, physiological, social and spiritual wellbeing.

Ayurveda has given theory of *Panchamahabhuta* and *Tridoshas* which are present in the body along with mind and spirit. Together, these three *Doshas* determine the physiological balance and constitution of the individual which is called as *Prakriti*. In Ayurveda, *Prakriti* refers to genetically determined physical and mental constitution which differs in each individual.

According to Ayurveda, the human body is primarily made up of *Sapta Dhatus*. "*Sapta Dhatus*" is a Sanskrit word, which means seven constituent elements that is *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja*, *Shukra*. In common terms, they can be called plasma, blood, muscle, fat, bone, bone marrow and reproductive fluid respectively.^[4]

Among which *Meda* with *Jala* and *Prithvi* as its dominant elements, is solid and soft. It is the storage site for excess fat in the body. Definition of *Swastha* also refers to the moderate quantity of the seven *Dhatus* of the body. Disorders may develop if there is variation in it. In this context, the excess accumulation of *Meda Dhatu* that is *Medo Vruddhi* results in overweight/obesity and decrease in *Meda Dhatu* that is *Meda Kshaya* results in underweight. Charak has stated in *Ashtoninditiya Adhyaya* about *Sthaulyata* (obesity/overweight) and *Krushata* (underweight).^[5] If any *Dhatu* is weak then it is necessary to increase the *Bala* of *Dhatu* before it leads to *Vikriti*. And to know the *Bala* of *Dhatu* our *Acharyas* mentioned the *Sarata*.^[6]

According to modern science, *Meda* is present in fat cell. It consists of fat in it which is present in liquid state due to the body temperature but in concentrated state when the person dies. The function of *Meda Dhatu* is to lubricate the body, produce sweat, make the body strong and nourish the bone. In such circumstances, there is a gradual need for the proficient supervision of sleeplessness in a normal manner by proper analysis, subsequently following apt

Selection of volunteer as per inclusive Criteria and written consent was taken.

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Prakriti assessment was done with the help of MUHS approved, UG *Prakriti* assessment format.

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Nidra assessment was done with the help of PSQI (Pittsburgh Sleep Quality Index).

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Meda Dhatu assessment was done as under the headings, *Prakrut Meda*, *Medo Vruddhi*, *Meda Kshaya* with the help of

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- *Meda Dhatu Vruddhi Lakshana* Questionnaire (validated by ethical committee).
- *Meda Dhatu Kshaya Lakshana* Questionnaire (validated by ethical committee).

lifestyle and getting rid of the troubles as of source itself. Need has always been there to build up certain modalities for the management of *Anidra* (insomnia)^[7] which could be secure, valuable, cost efficient with no adverse reaction, as compared to the remedial measures of various method of medicine.

In *Ayurveda Acharya Charak* has stated in *Charak Sutrasthan*, *Adhyay 21/51* "*Swapnahar Samutthe Cha Sthaulya Karshye Visheshatah*" that means *Aahar* and *Nidra* are the main causes for *Sthaulya* and *Karshya*.^[8]

AIM: To study, the effect of *Nidra* on *Meda dhatu* with special reference to different *Deha Prakriti*.

OBJECTIVES

- 1) To study the relation between *Nidra* and *Meda Dhatu* in different *Deha Prakriti*.
- 2) To study the relation between *Nidra* and different *Deha Prakriti*.
- 3) To study the relation between different *Deha Prakriti* and *Meda Dhatu*.

MATERIALS AND METHODS

This study is designed to observe the effect of *Nidra* on *Meda Dhatu* with special reference to different *Dehaprakriti*. The study is observational and cross sectional.

Method of Selection of Study Subject

Inclusion criteria

- Age group between 18 to 45 years
- Individuals irrespective of gender, economic status.
- Subject ready to give informed consent.

Exclusion criteria

- Individuals with present history of any major illness.
- Those with age less than 18 years and more than 45 years will be excluded.

Study Setting: The study was carried out under two headings, viz., conceptual study and observational study.

- Body mass index
- Girth measurement

Observed data was analyzed with the help of Chi-square test.

Subjective Parameters

- Assessment of *Deha Prakriti* was done with the help of MUHS approved UG *Deha Prakriti* assessment proforma.
- Assessment of *Nidra* was done with the help of Pittsburgh Sleep Quality Index (PSQI).
- Assessment of *Medovruddhi, Medokshaya* was done as per the *Lakshanas* mentioned In Ayurvedic literature in the form of questionnaire with a grading manner, which was validated by the ethical committee.

Objective Parameters

According to modern science, diagnostic tool for *Medo Vruddhi, MedoKshaya* and *Samyak Meda* are:

- Girth Measurement
- BMI

OBSERVATIONS AND RESULTS

Association between *Nidra* and *Meda Dhatu* in the form of percentage

The statistical analysis indicates a significant association between *Nidra* and above mentioned, *Meda Vruddhi-Kshaya Lakshanas* and BMI, girth measurement. With a p-value of less than the commonly chosen significance level of 0.05, hence, we reject the null hypothesis. Therefore, there is evidence to suggest that there is a meaningful relationship or association between *Nidra* and *Meda Dhatu Vruddhi Kshaya Lakshanas*, BMI, girth measurement.

Sleep score	PSQI<5 (69%)				PSQI>/=5 (31%)			
<i>Meda Lakshana</i> grading	0	1	2	3	0	1	2	3
<i>Shrama</i>	70	26	4	0	41	45	12	0
<i>Udarparshwa Vruddhi</i>	91	7	1	0	80	19	0	0
<i>Daurgandhya</i>	72	25	1	1	45	39	16	0
<i>Kaas</i>	88	11	0	0	40	6	0	3
<i>Snigdhangha</i>	78	14	6	1	52	13	26	10
<i>Kshudra Shwas</i>	72	25	1	1	45	39	16	0
<i>PleehaVruddhi</i>	97	3	0	0	97	0	3	0
<i>Sandhisphutan</i>	78	18	3	0	52	26	13	10
<i>Akshnoayyas</i>	74	26	0	0	45	35	13	6
<i>Raukshata</i>	77	22	1	0	45	39	13	0
<i>Glani</i>	85	11	3	0	52	29	16	3
BMI	59	21	17	3	39	35	22	3
Girth measurement	52	40	7	0	32	48	19	0

Association between *Nidra* and *Deha Prakriti* w.r.t percentage

The Chi Square test did not reveal a statistically significant association between *Nidra* and *Deha Prakriti* with a p-value of 0.292. Therefore, it can be concluded that there is no significant relation between *Deha Prakriti* and *Nidra*.

	<i>Kapha Pitta</i>	<i>Kapha Vata</i>	<i>Pitta Kapha</i>	<i>Pitta Vata</i>	<i>Vata Kapha</i>	<i>Vata Pitta</i>
69% (<5PSQI)	14	3	33	20	10	19
31% (>/=5PSQI)	55	6	3	6	10	19

Association between *Deha Prakriti* and *Meda Dhatu* in the form of percentage

The Chi Square test did not reveal a statistically significant association between *Meda Dhatu Vruddhi Kshaya Lakshana*, BMI, girth measurements and *Deha Prakriti*. There is insufficient evidence to reject the null hypothesis of no association. Therefore, it can be concluded that, based on this analysis, there is no significant relationship between *Meda Dhatu Vruddhi Kshaya Lakshana* assessed with the help of BMI and girth measurements with *Deha Prakriti*.

Deha Prakriti	Kapha Dosha Pradhan Prakriti (31%)				Pitta Dosha Pradhan Prakriti (40%)				Vata Dosha Pradhan Prakriti (29%)			
	0	1	2	3	0	1	2	3	0	1	2	3
<i>Meda Dhatu Lakshana gradation</i>												
<i>Shrama</i>	26	58	16	0	75	20	5	0	79	21	0	0
<i>Udarparshwa Vruddhi</i>	74	22	3	0	92	7	0	0	96	3	0	0
<i>Daurgandhya</i>	58	29	10	3	87	12	0	0	89	10	0	0
<i>Kaas</i>	81	16	3	0	87	12	0	0	100	0	0	0
<i>Snigdhanga</i>	51	13	26	10	70	22	5	2	90	3	7	0
<i>Kshudra Shwas</i>	29	52	16	3	75	22	0	2	86	14	0	0
<i>Pleeha Vruddhi</i>	93	3	3	0	97	2	0	0	100	0	0	0
<i>Sandhisputan</i>	64	13	13	10	90	10	0	0	48	45	7	0
<i>Akshnoayas</i>	61	19	13	6	75	25	0	0	55	45	0	0
<i>Raukshata</i>	68	19	19	0	82	17	0	0	48	48	3	0
<i>Glani</i>	64	2	16	3	80	17	2	0	79	17	3	0
BMI	42	6	45	6	10	70	17	2	59	38	3	0
Girth measurement	16	58	25	0	32	62	5	0	86	10	3	0

DISCUSSION

Relation between *Nidra* and *Meda Dhatu*

Nidra is one of the important pillars of life providing physical and mental health along with which it creates happiness in life, increases the strength, maintains the consistency of the body and maintains longevity of life. Person is healthy means it has balanced *Doshas*. Acharyas has stated the consequences of improper *Nidra* like *Anidra* or *Alpanidra* can lead to *Vata Dosha Vruddhi* and *Atinidra* can lead to *Kapha Dosha Vruddhi*, daytime sleep can lead to *Pitta Prakop* or *Tridosh Prakop* as well. That is, improper sleep can cause imbalance of *Doshas* which will hamper the *Prakrut Karma* (physiological processes) of them in the body. Hence, will contribute to improper formation of *Dhatu*s including the *Meda Dhatu*. In the present study, as the volunteers have had disturbed quality of sleep with different range, they showed the improper proportion of *Meda* accordingly. Like those with significant sleep disturbance had major contribution to the *Meda Dhatu Vruddhi Kshaya Lakshanas* than that of the people who had less disturbed sleep quality.

Relation between *Deha Prakriti* and *Nidra*

As *Acharyas* in *Samhitas* has given the symptoms of *Nidra* as per *Ek Doshaj Prakriti*. In my data, volunteers are found to have *Dwandwaj Prakriti* (that is they have dominance of two *Doshas* in them). Therefore, these people will show the mix symptoms of both the *Doshas*. That is, even though a person with *Dwandwaj Prakriti* is having one *Dosha* more dominating than the other two, he/she still may show the *Nidra* pattern of less dominating *Dosha* as well. And this phenomenon is unpredictable due to various

influencing factors of *Prakriti* such as the internal and external factors like stress, lifestyle, profession of that person, mental state, *Manas Prakriti*, *Jatyadi Prakriti*, factors responsible for the making of *Prakriti* like *Shukra*, *Shonit*, *Garbhashaya*, *Kaal*, *Matru Ahar-Vihar* etc. these affects the *Manas* and *Sharir Doshas* and hence their imbalance disturbs or alters the physiological processes in body including *Nidra*.

Relation between *Deha Prakriti* and *Meda Dhatu*

No significant relationship was observed between *Meda Dhatu Vruddhi Kshaya Lakshana* assessed with the help of BMI and girth measurements with *Deha Prakriti*. The reason to justify this conclusion is that even though individual having *Pradhan Dosha* (dominating *Dosha*) in *Dwandwaj Prakriti*, there are other factors as well which influence the *Meda Dhatu* like remaining *Doshas* of *Dwandwaj Prakriti* which may show its own effect on *Meda Dhatu*, the lifestyle, eating and sleeping habits, exercise, stress factor, profession, etc can alter the *Meda Dhatu* proportion and formation. Hence, though the *Doshaj Prakriti* is same, there will be a difference between the body elements including *Dhatu*s as well.

CONCLUSION

Sleep plays a vital role in good health and well-being throughout your life. Getting enough quality sleep at the right times can help protect mental health, physical health, quality of life, and safety. The way one feel while person is awake depends in part on what happens while person is sleeping. During sleep, your body is working to support healthy brain function and maintain one's physical health.

Based on the observational study, the following conclusions can be drawn:

1. There is a significant association between *Nidra* and all the *Lakshanas* of *Medo Vruddhi* and *Medakshya* under study, along with BMI and girth. Consequently, it can be concluded that there is an association between *Nidra* and *Meda Dhatu*.
2. No significant association was observed between *Nidra* and *Deha Prakriti* in my study.
3. Further, there is no observed association between *Deha Prakriti* and all the *Lakshanas* of *Medo Vruddhi* and *Medakshya* under study, as well as BMI and girth. Thus, it may be inferred that there is no association between *Deha Prakriti* and *Meda Dhatu* in my study.

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*Address for correspondence

Dr. Minal Patil

PG Scholar,

Department of Kriya Sharir,

Government Ayurvedic College,
Maharashtra, India.

Email:

minalpa.shona1205@gmail.com

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