



LIFESTYLE MODIFICATION OF SHIFT WORKERS

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Shift work allows for continuous services and production, 24 hours per day. Examples of such round-the-clock work include health care, customs and immigration, telecommunication, electrical utilities, and transportation etc. People vary in how they cope with shift work depending on their health, fitness, age, lifestyle, and domestic responsibilities; some adapt well, others do not. It is possible to alter our behavior or make lifestyle changes that may make shift work more tolerable.

According to Susurut '*svabhav eva vaa hetugariyan prakirtata*'^[1] means '*svabhav*' is the main reasons for sleep beside concept of '*saatva*' & '*tamas*'.

According to Charak '*yada tu mansi klantye.....*

Vishyebhyu.....swapti manav'^[2] means when mind gets fatigued after waking day working it gets inactive & produce sleep.

Stages of sleep: REM sleep and non-REM sleep stages.

Non-REM sleep
Stage 1 (Transition to sleep)
Stage 2 (Light sleep)
Stage 3 (Deep sleep)
Stage 4 (More intense deep sleep)
REM sleep (Dream sleep)

Factors that can lead to poor or inadequate deep sleep include.

- Being woken during the night (by outside noise),
- Working night shifts or swing shifts (due to light and excess noise),
- Smoking or drinking in the evening.

Work that is scheduled outside “normal” daylight hours (i.e. 9 am to 5 pm) is called “Shift work”. Shift work schedules can vary from one workplace to another. Workers may rotate through shifts or remain on a single shift (i.e. permanent nights).

- *‘ratrisvabhava prabhava matta ya tam bhutdhatri pravadnti tajgya’^[3]* means the sleep caused by nature of night is excellent sleep. It keeps every one lively, nourishes them like mother.

Our body’s “biological” clocks help maintain complex internal functions throughout a 24-hr day. A number of physiological functions show distinct rhythmic changes (*called Circadian Rhythms*) in the course of a 24-hour period. Working at night and sleeping during the day is opposite to the body’s “biological” clocks and what the body naturally wants to do. This may make sleeping difficult; it may also mean that the body cannot recover as quickly from physical and mental exertions/demands.

Performance on the night shift can be affected by.

- The type of shift schedule (permanent, rotating, split shift, etc)
- The nature of the task(s) (low concentration, unable to do work which need fine motor coordination)
- The performance demands of the task (unable to perform high performance)

NIDRA VEGA DHARANA

‘jambhaangmardastandra cha shirorogeakshigaurvam I

Nidraavidhardaat tatra svapnam samvahnani cha II’^[4]

Means sleep deprivation leads to yawning, muscular aching or cramps, sleepy behavior, headache, heaviness of eyelids or dropping of eyelids. Treatment for this is to have a good sleep with body massage.

- *‘Aakaleatiprasangacch na cha nidra nishevita I*

sukhaushi prakuryatkalaratriirvapra II’^[5]

means untimely sleep, excessive sleep or devoid of sleep all these take away both happiness & longevity like ‘kala ratri.’

- *‘Halimaak.....sukha budha’^[6]*

Means Improper sleep will lead to different diseases like Halimaka (type of jaundice), headache, heaviness in the body, fever, mental disturbances, obstruction of channels, dimition

of Agni, odema, nausea, rhinitis, half sided headache, bodyache, urticaria, cough, features of poisoning.

MODIFICATION FOR NIGHT WORKERS

Dietary and Eating Patterns Modification

- Eat a big meal at the start of your work schedule, and a moderate meal around midnight. Before going to bed in the morning, eat a regular breakfast meal in a small quantity
- Relax during meals and allow time for digestion
- Drink lots of water

'Rattrojagran ruksha snigdha prasvapna divva

Arrukshsmanabhisyandi twaseenprachlayitam^[7]

Means awakening at the night increase dryness in the body. Daysleep increases unctuousness in the body & sleeping in sitting posture during daytime does not increases unctuousness or dryness.

- Increase fiber content in our diet. Oat bran and ragi are rich in fiber content. Take in complex carbohydrates/whole grain carbohydrates instead of refined carbohydrate.
- Eat small, nutritional snacks throughout the shift helps to stay energized throughout the night
- Maintain regular eating patterns with well balanced meals (*avoid junk food & limit fat intake*)
- Eat the usual balance of vegetables, fruit, lean meat, poultry, fish, dairy products, grains, and bread
- Avoid excessive use of antacids, tranquilizers and sleeping pills
- Minimize the intake of caffeine and alcohol
- Avoid fast food and vending machines

SLEEP MODIFICATION

- Make sure that family and friends are aware of and considerate of the worker's sleep hours and needs
- Ensure you have a comfortable, quiet place to sleep during the day
- Air conditioning, telephone answering machine, foam ear plugs and good blinds are examples of devices that may improve the worker's sleep

- Make time for quiet relaxation before bed to facilitate better sleep (*reading, breathing exercises, muscle relaxation techniques, etc.*)
- Sleep on a set schedule to help establish a routine and to make sleep during the day easier
- Avoid strenuous exercise before sleeping because your body's metabolism will remain elevated for several hours and this makes sleeping difficult
- If failing to fall asleep after one hour, read a book or listen to quiet music
- If sleep still does not come, reschedule sleeping hours for later in the day.

'Yathakalamatau nidra rattrau sevet satmyat'^[8] means according to our condition we have to take proper duration sound sleep which provides happiness, nourishment, strength, virility, knowledge & healthy life.

*'Divarattro cha ye nityam svapna jagranocchitta
na tesham svaptam dosho jagrat vaapi jayete'*^[9]

SOCIAL ACTIVITIES MODIFICATION

- Schedule at least one daily meal with the family; this helps to keep communication channels open and promotes a good eating habit.
- Socialize with other shift workers and their families; this helps to minimize the disruption that shift work can have on your social life.
- Keep in touch with spouse and children daily.
- Establish good communication skills.
- Set time aside for just you and your spouse.
- Carefully plan family activities; family ties are a precious commodity (*plan days off in advance if possible*).
- Pay close attention to physical fitness; a regular exercise program helps the body adjust to the negative effects of shiftwork and it can also help improve the quality and quantity of sleep.
- Practice stress reduction.
- Use a calendar to schedule events.
- Try to prioritize tasks and tackle one at a time.

WORK-RELATED MODIFICATIONS

- Decrease the number of night shifts worked in a row.
- Night shift workers sleep less than day workers and become progressively more sleep-deprived over several days.
- You are more likely to recover from sleep deprivation if you can limit your number of third shifts to five or less, with days off in between.

'deham vishramte yasmattasmanidra prakirtata' means 'nidra' is useful making body & mind relaxed.

- If you work a 12-hour shift, you should limit work to four shifts in a row.
- After a string of night shifts, you should have more than 48 hours off, if possible.
- Avoid working prolonged shifts and putting in excessive overtime.
- Avoid long commutes, which can take time away from sleeping.
- Avoid frequently rotating shifts.
- It is more difficult to deal with rotating shifts than it is to work the same shift for a longer period of time. It can be easier to adjust to a clockwise shift rotation (e.g. going from day to evening to night shift).
- Take breaks during work hours to rest or even nap
- If you plan to nap on a break, keep it brief (15-30 minutes).
- Napping for extended periods of time (greater than 45 minutes) can make it difficult to get up and be alert immediately due to sleep inertia.
- Exposure to bright light while at work can help people stay awake during their shift.
- A cooler work environment can promote alertness, warm environments can contribute to sleepiness in some people.

AYURVEDIC MODIFICATION

'Asatmyajjagradardha prath supyadbhuktvaan'^[10] means if due to any reason if one have to awaken during night then he must sleep during day time half of the devoid of sleep of night, without having food.

'Dhatuamyam.....cha ayusha'^[11] means proper sleep helps in production of all *Dhatu* in proper amount & gives longevity.

*'Abhyangoutsadnaam snaanam gramyaanupoddakah rasa I
salyaanam sdadhi chiram sneho madam maansukham II
mansoanugudaah gandha sabda samvahani cha I
svasteerna sayan vesham sukha kalsthounvitah II'*^[12]

means sleeplessness can be treated by massage, unction, bath soup of domestic, marshy & aquatic animals, *Sali rice* (a variety of rice) with curd, unctuous substance, milk, alcohol & psychic pleasure, smell of scents & hearing of sound of ones own taste, comfortable touch, application of anointments to body, *Tarpana* for eyes, comfortable bed, home & sleeping at proper time.

In today's modern era, we need to do work clockwise but also have consideration that we do not have any ill effects of that workload. All this can be managed by some modification which are based on Ayurvedic concept and elaborated according to modern era, in which we are living.

The amount of time we spend in each stage of sleep changes as the night progresses. For example, most deep sleep occurs in the first half of the night. Later in the night, your REM sleep stages become longer, alternating with light Stage 2 sleep. This is why if we are sensitive to waking up in the middle of the night, it is probably in the early morning hours, not immediately after going to bed.

If we want to make mornings less painful, we have to set a wake-up time that's a multiple of 90 minutes, the length of the average sleep cycle. For example, if we go to bed at 10 p.m., set our alarm for 5:30 (a total of 7 ½ hours of sleep) instead of 6:00 or 6:30.

We have to awaken to the reality that night shift which was only amongst medical professionals, armed forces and aviation sector are far more common place today. So rather than feeling a victim of such shifts, it is better to devise a way to find a solution.

By making certain modification in our daily routine life we can reduce adverse effect of these night shifts to much extent & enjoy good life with good health, happiness & prosperity.

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