Title: Yog Nidra for Sleep disturbance in female

Degree of B.Sc. (Hons.)

Yogic Art and Science

By

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(Neha Yadav)

CERTIFICATE

This is to certify that the project of "**Yog Nidra for Sleep disturbance in female** " has been carried out by the candidate under my direct supervision and the findings have been checked thoroughly.

I am satisfied with the work of **(Neha Yadav) BSc in Yogic Art and Science** and Reg No: **VB-0603 of 2018-19** is submitted to Visva Bharati, Santiniketan, West bengal, INDIA. It is further certified that **(Neha Yadav)** has undergone the prescribed course of studies leading to Bachelor of Science Degree Examinations in accordance with the university regulations**.**

Date: 02/08/2021

Dr. Samiran Mondal

Professor and HOD

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CONTENTS

1.Title

Yog Nidra for Sleep disturbance in female

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2. Abstract

Sleep difficulties are greater risk in women compared to men sleep may be affected by many variations such as reproductive hormones, stress, depression aging and other factors. Yog nidra attains a positive state of deep relaxation. The practice produces a state of simultaneous relaxation and detachment resulting in inner awareness and release of stress on all planes of one's being. This is a pilot study which was carried out in female aged 40-60 years with an aim to assess effects of yog nidra on various dimensions of the sleep disturbance. The study procedure is summarized by a case reporting format. Selected Patients with sleep disturbance were examined at home by me under expert's guidance. Relevant history was taken and a physical examination was done. The patients with sleep disturbance were diagnosed myself and referred to our experts. Sleep disturbance patients who met the inclusion criteria were given a plain yoga nidra as therapy, Pranayama and asana on them. The questionnaire consisted of 16 items. Yoga nidra affected on sleep disturbance we get this result through experiment and bhramri is also very important it is a sound therapy treatment by pranayama and other pranayama which is beneficial in reducing blood pressure which is a main factor in sleep disturbance. Modern medical system or medicine is good in only critical condition otherwise it is very harmful for our body so we have to try these therapies and try to keep ourself fit and healthy.

Key words- Sleep disturbance, Insomnia, Yoganidra, Bhramri, Women.

3. INTRODUCTION

Insomnia is a sleep disorder in which you have trouble falling and/or staying asleep.

The condition can be short-term (acute) or can last a long time (chronic). It may also come and go. All Sleep Disorders involve daytime stress and trouble with work, school or daily activities because of sleep problems during the night. People with a sleep disorder often have depression, anxiety, trouble thinking, remembering or learning information that need to be treated along with the particular sleep problem.

Ongoing sleep issues like insomnia (trouble falling asleep) or excessive (too much) sleeping can lead to other mental health problems, so getting help is important if you suffer from these conditions.

a) Physiology of Sleep disturbances:

In addition to changes in sleep duration, and pattern the mental ability reduces for a female with daily activities. This leads to disturbance of sleep on regular basis and become lifestyle problem by old age. So, they tend to have a harder time falling asleep and more trouble staying asleep. As the circadian mechanism in older people becomes less efficient, their sleep schedule is shifted forward. Even when they manage to obtain 7 or 8 h sleep, they wake up early, as they have gone to sleep quite early.

Loud snoring, which is more common in the elderly, can be a symptom of obstructive sleep apnoea, which puts a person at risk for cardiovascular diseases, headaches, memory loss, and depression. Restless legs syndrome and periodic limb movement disorder that disrupt sleep are more prevalent in older persons. Other common medical problems of old age such as hypertension diabetes mellitus, renal failure, respiratory diseases such as asthma, immune disorders, gastroesophageal reflux disease, physical disability, dementia, pain, depression, and anxiety are all associated with sleep disturbances.

b) Sleeplessness:

There are several different types of sleep-wake disorders, of which insomnia is the most common. Other sleep-wake disorders include obstructive sleep apnea, parasomnias, narcolepsy, and restless leg syndrome. Sleep disorders (or sleep-wake disorders) involve problems with the quality, timing, and amount of sleep, which result in daytime distress and impairment in functioning. Sleep-wake disorders often occur along with medical conditions or other mental health conditions, such as depression, anxiety, or cognitive disorders. About one-third of adult's report insomnia symptoms and 6-10 percent meet the criteria for insomnia disorder.

Need of the study: Yog nidra attains a positive state of deep relaxation. The practice produces a state of simultaneous relaxation and detachment resulting in inner awareness and release of stress on all planes of one's being. This is a pilot study which was carried out in female aged 40-60 years with an aim to assess effects of yog nidra on various dimensions of the sleep disturbance.

4. REVIEW OF ANCIENT LITERATURE

a) Definition -Nidra

i) According to patanajali

अबावप्रत्यमारम्बना वणृत्तणनद्र य ा ॥ १०॥

abhavapratyayalambana vrittirnidra

Dreamless Sleep is the Mental Modification Produced by the Condition of Inertia as the State of Vacuity or Negation (Of Waking* and *Dreaming)

स्वप्ननिद्राज्ञानालम्बनं वा॥३८॥

svapna-nidra-jnana-alambanam va

Or (va) we can support (alambanam) a peaceful state of mind through the knowledge (jnana) that we gain from dreams (svapna) and deep sleep (nidra).

ii) According to Mandukya Upanishad

स्वप्ननिद्रायुतावाद्यौ प्राज्ञस्त्वस्वप्ननिद्रया । न निद्रां नैव च स्वप्नं तुर्ये पश्यन्ति निश्चिताः ॥ १४ ॥

Vishwa and Taijasa, the former two are associated with the conditions of dream and sleep, Prajna is the state without dream. Those who have known the Truth do not see either sleep or dream in Turiya

अन्यथा गृह्णतः स्वप्नो निद्रा तत्त्वमजानतः । विपर्यासे तयोः क्षीणे तुरीयं पदमश्नुते ॥ १५ ॥

Dream is the misapprehension of Reality, while sleep is the state in which one is in a state of non-apprehension of Reality. When the erroneous knowledge in these two states disappears, Turiya is Realized.

iii) Chandogya upanishad

तद्यत्रैतत्सुप्तः समस्त्: सम्प्रसन्नः स्वप्नं न विजानात्यासु तदा नाडीषु सृप्तो भवति तं न कश्चन पाप्मा स्पृशति तेजसा हि तदा सम्पन्नो भवति ॥ ८.६.३ ॥

tadyatraitatsuptaḥ samastḥ samprasannaḥ svapnaṃ na vijānātyāsu tadā nāḍīṣu sṛpto bhavati taṃ na kaścana pāpmā spṛśati tejasā hi tadā sampanno bhavati || 8.6.3 ||

When a person is sound asleep, all his organs are inactive and quiet. He is free from all worries, and he does not have any dreams. The organs then disappear into the veins. No sin can affect him then, for the rays of the sun have surrounded him.

b) **Types of Sleep:**
Various Acharyas have given various opinions regarding the types of sleep. But broadly it can classify into 2 types.
1) Svabhavika Nidra – which comes regularly and naturally at night.
2) Asvabhavika Nidra – which comes due to some other causes.

निद्राभेदाः॥ **Types of Nidra**

Ayurveda literature described various types of sleep. There exist various causes related to body, mind and also the outer environment which may affect the process of sleep. The cause, effect and type of sleep decide its positive or negative effects on body and mind. Therefore, based on such factors, sleep has been categorized into various types by Acharya Charaka. These are as below

i) तमोभवा॥ Tamobhava

Abundance of Tamas guna leads to induction of sleep. Therefore, tamas excess could be the only causative factor for sleep in some individuals at some time and then such kind of sleep is identified as Tamobhava.

ii) श्लेष्मसमुद्भवा॥ Shleshmasamudbhava

Dominance of kapha dosha in body induces sleep. Thus, when excess kapha causes sleep it is called as shleshmasamudbhava.

iii) व्याध्यनुवर्ती॥ Vyadhyanuvarti:

In some rogas, excess sleep is manifested as a symptom. In such cases the sleep is believed to be disease related.

iv) आगंतुकी॥ Agantuki:

Sleep is also observed as an Arishta lakshana (अरिष्टलक्षणः) in certain cases. Such sleep along with some other symptoms is indicative of that person's journey approaching towards end of life.

v) मनःशरीरश्रमसंभवा॥ Manashareershramasambhava:

Exhaustion of mind (Manas) due to its activities like overthinking and exhaustion of body from strenuous activities makes body, mind and senses incapable of performing further activities and then the exhausted individual sleeps. Such kind of sleep resulting from exhaustion is included under this category.

vi) रात्रिस्वभावप्रभवा॥ Ratrisvabhavprabhava

Tamas Guna dominance due to darkness is believed to be the natural property of night (Ratri). And due to dominance of tamas sleep is induced. This is the course of natural cycle of sleep. Thus, sleep that is induced due to day and night cycle, at night, is included in this category. This type of sleep is called as Bhootadhatri (भूतधात्री) i.e., the one that sustains living beings or their life.

c) निद्राफलम्॥ Effects of sleep

Nidra plays important role in controlling various aspects of life in a human being. Even the sustenance of life or disruption can also be related to sleep.

निद्रायत्तं सुखं दुःखं पुष्टिः कार्श्यं बलाबलम् । वृषता क्लीबता ज्ञानमज्ञानं जीवितं न च॥

अकालेऽतिप्रसङ्गाच्च न च निद्रा निषेविता । सुखायुषी पराकुर्यात् कालरात्रिरिवापरा ॥ (Char Samh 21.11)

nidrāyattaṁ sukhaṁ duḥkhaṁ puṣṭiḥ kārśyaṁ balābalam । vr̥ṣatā klībatā jñānamajñānaṁ jīvitaṁ na ca॥

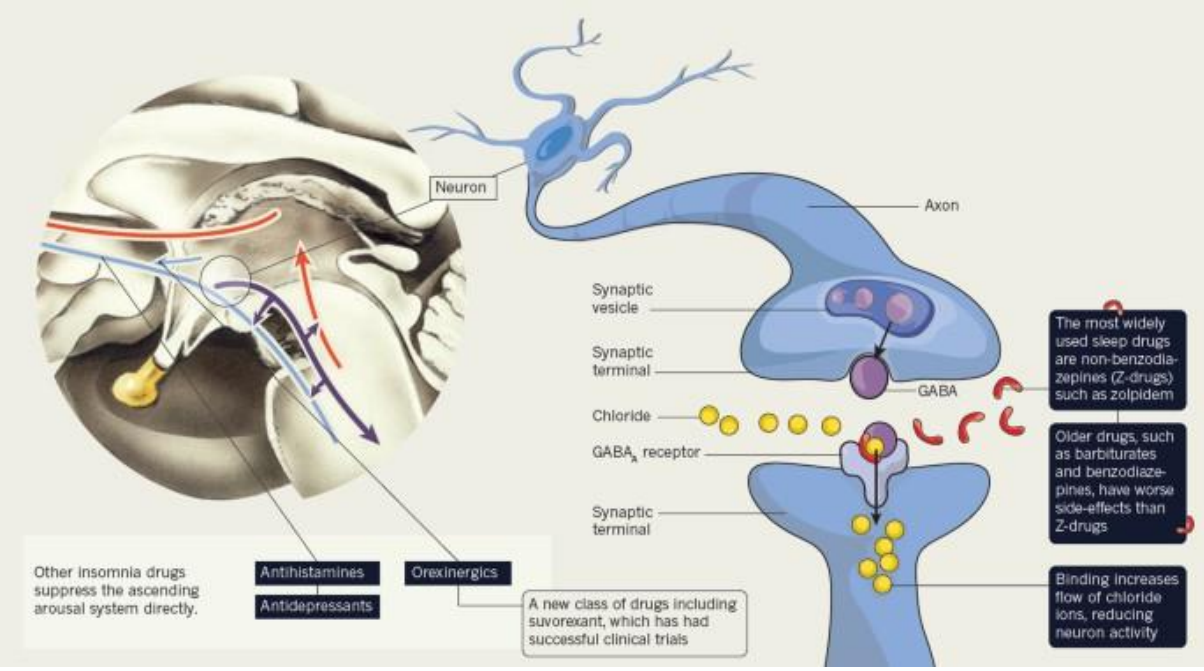
akāle'tiprasaṅgācca na ca nidrā niṣevitā । sukhāyuṣī parākuryāt kālarātririvāparā ॥ (Char Samh 21.11)

In human beings, happiness and misery, nourishment and emaciation, strength and weakness, fertility and infertility, knowledge and ignorance, and life and death depend upon proper (and improper sleep). Happiness and longevity both can be taken away from an individual if the person takes Untimely, excessive sleep or is sleep deprived. The energy obtained from

appropriately taken sleep is thus compared with the real knowledge of yogis which gives them spiritual powers.

5. REVIEW OF MODERN LITERATURE

a) Definition



i) Anatomy of Sleep

Several structures within the brain are involved with sleep.

The **hypothalamus**, a peanut-sized structure deep inside the brain, contains groups of nerve cells that act as control centers affecting sleep and arousal. Within the hypothalamus is

the **suprachiasmatic nucleus** (SCN) – clusters of thousands of cells that receive information about light exposure directly from the eyes and control your behavioural rhythm. Some people with damage to the SCN sleep erratically throughout the day because they are not able to match their circadian rhythms with the light-dark cycle. Most blind people maintain some ability to sense light and are able to modify their sleep/wake cycle.

The **brain stem**, at the base of the brain, communicates with the hypothalamus to control the transitions between wake and sleep. (The brain stem includes structures called the pons, medulla, and midbrain.) Sleep-promoting cells within the hypothalamus and the brain stem produce a brain chemical called *GABA*, which acts to reduce the activity of arousal centers in the hypothalamus and the brain stem. The brain stem (especially the pons and medulla) also plays a special role in REM sleep; it sends signals to relax muscles essential for body posture and limb movements, so that we don't act out our dreams.

The **thalamus** acts as a relay for information from the senses to the **cerebral cortex** (the covering of the brain that interprets and processes information from short- to long-term memory). During most stages of sleep, the thalamus becomes quiet, letting you tune out the external world. But during REM sleep, the thalamus is active, sending the cortex images, sounds, and other sensations that fill our dreams.

The **pineal gland**, located within the brain's two hemispheres, receives signals from the SCN and increases production of the hormone *melatonin*, which helps put you to sleep once the lights go down. People who have lost their sight and cannot coordinate their natural wake-sleep cycle using natural light can stabilize their sleep patterns by taking small amounts of melatonin at the same time each day. Scientists believe that peaks and valleys of melatonin over time are important for matching the body's circadian rhythm to the external cycle of light and darkness.

The **basal forebrain**, near the front and bottom of the brain, also promotes sleep and wakefulness, while part of the **midbrain** acts as an arousal system. Release of adenosine (a chemical by-product of cellular energy consumption) from cells in the basal forebrain and probably other regions supports your sleep drive. Caffeine counteracts sleepiness by blocking the actions of adenosine.

The **amygdala**, an almond-shaped structure involved in processing emotions, becomes increasingly active during REM sleep.

ii) Sleep mechanisms

Two internal biological mechanisms–circadian rhythm and homeostasis–work together to regulate when you are awake and sleep.

Circadian rhythms direct a wide variety of functions from daily fluctuations in wakefulness to body temperature, metabolism, and the release of hormones. They control your timing of sleep and cause you to be sleepy at night and your tendency to wake in the morning without an alarm. Your body's biological clock, which is based on a roughly 24-hour day, controls most circadian rhythms. Circadian rhythms synchronize with environmental cues (light, temperature) about the actual time of day, but they continue even in the absence of cues.

Sleep-wake homeostasis keeps track of your need for sleep. The homeostatic sleep drive reminds the body to sleep after a certain time and regulates sleep intensity. This sleep drive

gets stronger every hour you are awake and causes you to sleep longer and more deeply after a period of sleep deprivation.

Factors that influence your sleep-wake needs include medical conditions, medications, stress, sleep environment, and what you eat and drink. Perhaps the greatest influence is the exposure to light. Specialized cells in the retinas of your eyes process light and tell the brain whether it is day or night and can advance or delay our sleep-wake cycle. Exposure to light can make it difficult to fall asleep and return to sleep when awakened.

Night shift workers often have trouble falling asleep when they go to bed, and also have trouble staying awake at work because their natural circadian rhythm and sleep-wake cycle is disrupted. In the case of jet lag, circadian rhythms become out of sync with the time of day when people fly to a different time zone, creating a mismatch between their internal clock and the actual clock.

b) Importance Of Sleep In Female:

Sleep affects your mental and physical health. Getting good sleep helps boost your mind and mood and can help prevent health problems. Women are more likely than men to have insomnia and other sleep problems.[1] Changing hormones during the menstrual cycle, pregnancy, and menopause can affect how well a woman sleeps

6. Medical management:

Most medications affecting central nervous system (CNS) functioning can induce insomnia in some patients. A sleep history in a patient with insomnia should include a review of all medications, including OTC products. Common culprits include medications affecting neurotransmitters, such as norepinephrine, serotonin, acetylcholine, or dopamine. Less commonly, agents such as antibiotics, antihypertensives, oral contraceptives, and thyroid replacements can induce insomnia in susceptible individuals. Over-the-counter medications that may induce insomnia include decongestants (including nose sprays), weight loss agents, ginseng preparations, and high-dose vitamin B_1. Finally, chronic and long-term sedative/hypnotic use to induce sleep may cause tolerance to the sedative effect and can contribute to chronic insomnia.

a) Altering Medications

Medications that are used in somnolent patients to induce alertness include the amphetamines (dextroamphetamine and methylphenidate) and pemoline. Pemoline can cause hepatic toxicity in susceptible patients. The amphetamines are considered to have high abuse potential and are Schedule II prescription drugs. The newer alerting agent modafinil is pharmacologically distinct and has less potential for abuse (Schedule IV). Side effects of these drugs include personality changes, tremor, hypertension (dextroamphetamine and methylphenidate), headaches, and gastrointestinal reflux.

b) Mindfulness techniques:

i) What is Mindfulness?

Mindfulness is the basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us.

It's not all in your head—you can practice mindfulness by sitting down for a formal meditation practice, or by being more intentional and aware of the things you do each day.

How to Sit for Mindfulness Meditation

1. **Take your seat.** Whatever you're sitting on—a chair, a meditation cushion, a park bench—find a spot that gives you a stable, solid seat, not perching or hanging back.
2. **Notice what your legs are doing.** If on a cushion on the floor, cross your legs comfortably in front of you. (If you already do some kind of seated yoga posture, go ahead.) If on a chair, it's good if the bottoms of your feet are touching the floor.
3. **Straighten—but don't stiffen—your upper body.** The spine has natural curvature. Let it be there. Your head and shoulders can comfortably rest on top of your vertebrae.
4. **Situate your upper arms parallel to your upper body.** Then let your hands drop onto the tops of your legs. With your upper arms at your sides, your hands will land in the right spot. Too far forward will make you hunch. Too far back will make you stiff. You're tuning the strings of your body—not too tight and not too loose.
5. **Drop your chin a little and let your gaze fall gently downward.** You may let your eyelids lower. If you feel the need, you may lower them completely, but it's not necessary to close your eyes when meditating. You can simply let what appears before your eyes be there without focusing on it.
6. **Be there for a few moments.** Relax. Bring your attention to your breath or the sensations in your body.
7. **Feel your breath**—or some say "follow" it—as it goes out and as it goes in. (Some versions of this practice put more emphasis on the outbreath, and for the inbreath you simply leave a spacious pause.) Either way, draw your attention to the physical sensation of breathing: the air moving through your nose or mouth, the rising and falling of your belly, or your chest. Choose your focal point, and with each breath, you can mentally note "breathing in" and "breathing out."
8. **Inevitably, your attention will leave the breath and wander to other places**. Don't worry. There's no need to block or eliminate thinking. When you get around to noticing your mind wandering—in a few seconds, a minute, five minutes—just gently return your attention to the breath.
9. **Practice pausing before making any physical adjustments**, such as moving your body or scratching an itch. With intention, shift at a moment you choose, allowing space between what you experience and what you choose to do.
10. **You may find your mind wandering constantly**—that's normal, too. Instead of wrestling with or engaging with those thoughts as much, practice observing without

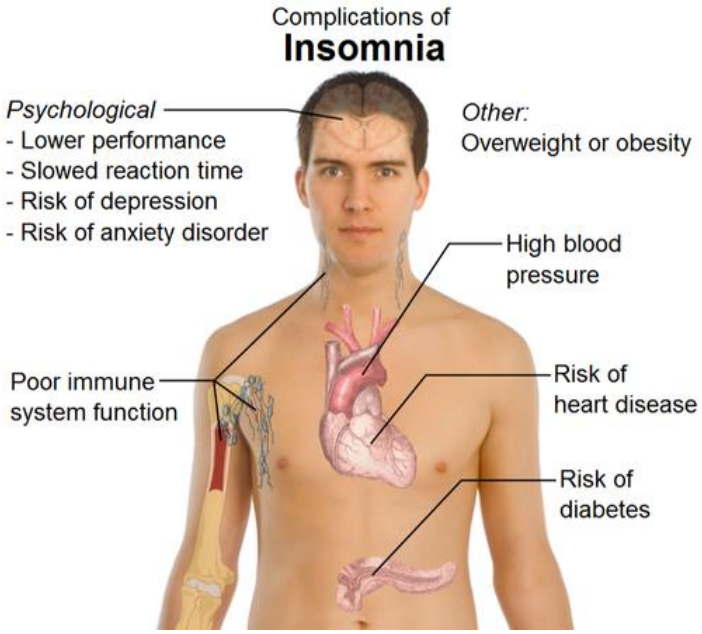
needing to react. Just sit and pay attention. As hard as it is to maintain, that's all there is. Come back over and over again without judgment or expectation.

11. **When you're ready, gently lift your gaze (if your eyes are closed, open them)**. Take a moment and notice any sounds in the environment. Notice how your body feels right now. Notice your thoughts and emotions. Pausing for a moment, decide how you'd like to continue on with your day.

c) Causes

d) There are many different types of sleep disorders. Some may be caused by other underlying health conditions.

i) **Insomnia**



Insomnia refers to the inability to fall asleep or to remain asleep. It can be caused by jet lag, stress and anxiety, hormones, or digestive problems. It may also be a symptom of another condition.

Insomnia can be problematic for your overall health and quality of life, potentially causing:

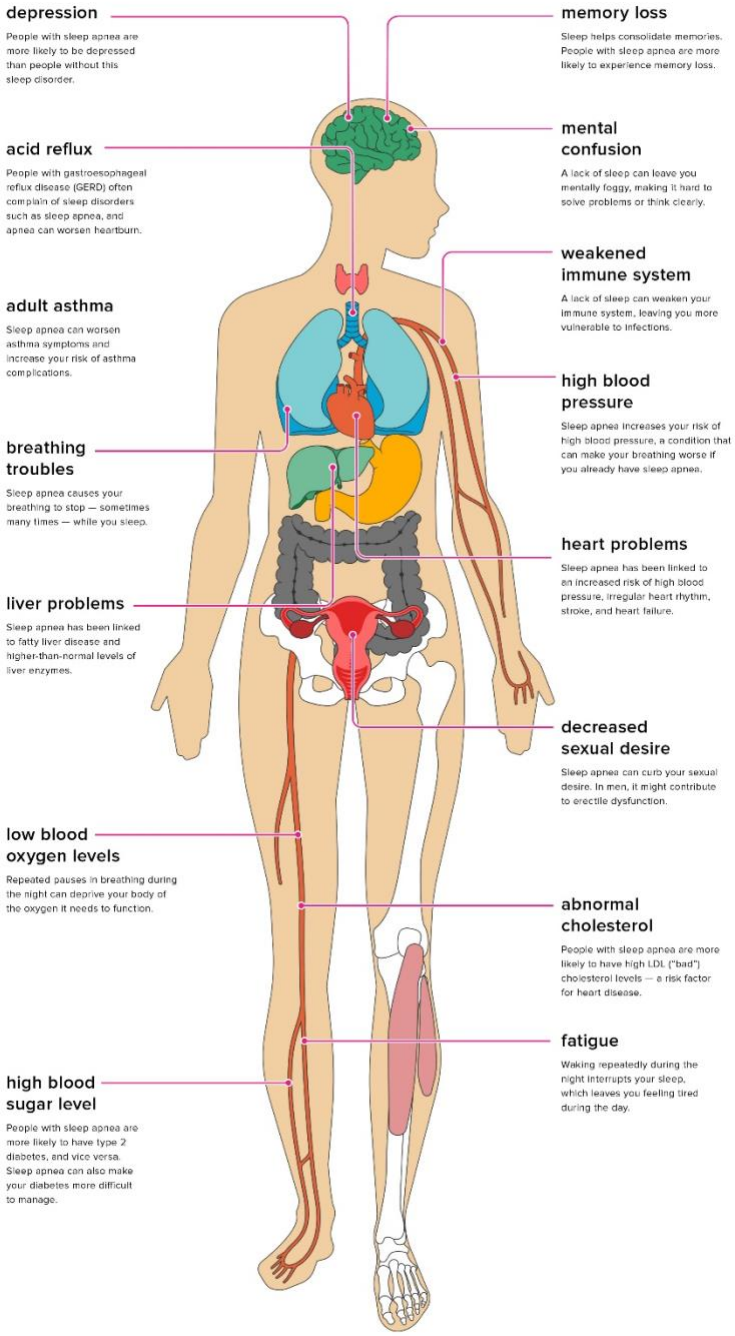
- depression
- difficulty concentrating
- irritability
- weight gain
- impaired work or school performance

Unfortunately, insomnia is extremely common.

The disorder is most prevalent among older adults and women.

Insomnia is usually classified as one of three types:

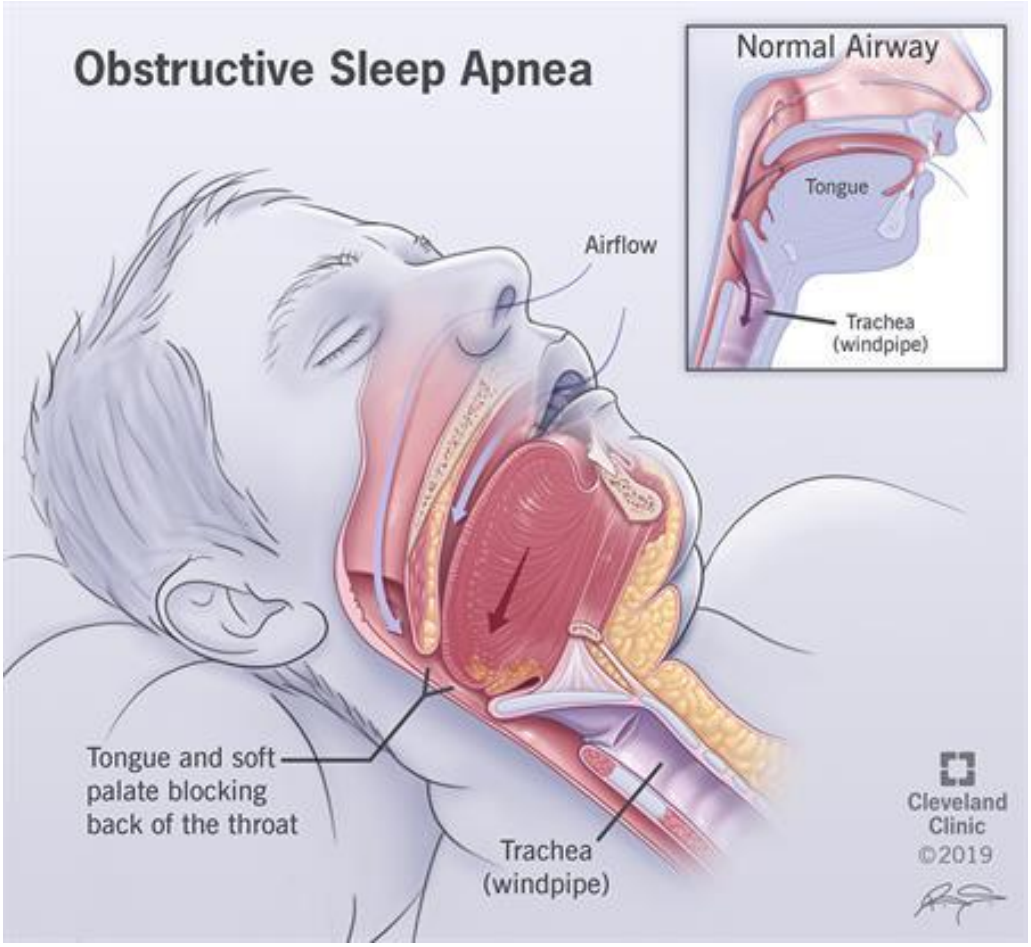
- chronic, when insomnia happens on a regular basis for at least 1 month
- intermittent, when insomnia occurs periodically
- transient, when insomnia lasts for just a few nights at a time



ii) **Sleep apnea**

Sleep apnea is characterized by pauses in breathing during sleep. This is a serious medical condition that causes the body to take in less oxygen. It can also cause you to wake up during the night.

There are two types:



- obstructive sleep apnea, where the flow of air stops because airway space is obstructed or too narrow, and
- central sleep apnea, where there is a problem in the connection between the brain and the muscles that control your breath.

iii) **Parasomnias**

Parasomnias are a class of sleep disorders that cause abnormal movements and behaviours during sleep. They include:

- sleepwalking

- sleep talking
- groaning
- nightmares
- bedwetting
- teeth grinding or jaw clenching

iv) **Restless leg syndrome**

Restless leg syndrome (RLS) is an overwhelming need to move the legs. This urge is sometimes accompanied by a tingling sensation in the legs. While these symptoms can occur during the day, they are most prevalent at night.

RLS is often associated with certain health conditions, including attention deficit hyperactivity disorder (ADHD) and Parkinson's disease, but the exact cause isn't always known.

v) **Narcolepsy**

Narcolepsy is characterized by "sleep attacks" that occur while awake. This means that you will suddenly feel extremely tired and fall asleep without warning.

The disorder can also cause sleep paralysis, which may make you physically unable to move right after waking up. Although narcolepsy may occur on its own, it is also associated with certain neurological disorders, such as multiple sclerosis.

e) Pathology

i) Clinical symptoms

Symptoms differ depending on the severity and type of sleeping disorder. They may also vary when sleep disorders are a result of another condition.

However, general symptoms of sleep disorders include:

- difficulty falling or staying asleep
- daytime fatigue
- strong urge to take naps during the day
- unusual breathing patterns
- unusual or unpleasant urges to move while falling asleep
- unusual movement or other experiences while asleep
- unintentional changes to your sleep/wake schedule

- irritability or anxiety
- impaired performance at work or school
- lack of concentration
- depression
- weight gain

ii) causes of sleep disorders

There are many conditions, diseases, and disorders that can cause sleep disturbances. In many cases, sleep disorders develop as a result of an underlying health problem.

iii) Allergies and respiratory problems

Allergies, colds, and upper respiratory infections can make it challenging to breathe at night. The inability to breathe through your nose can also cause sleeping difficulties.

iv) Frequent urination

Nocturia, or frequent urination, may disrupt your sleep by causing you to wake up during the night. Hormonal imbalances and diseases of the urinary tract may contribute to the development of this condition.

Be sure to call your doctor right away if frequent urination is accompanied by bleeding or pain.

v) Chronic pain

Constant pain can make it difficult to fall asleep. It might even wake you up after you fall asleep. Some of the most common causes of chronic pain include:

- arthritis
- chronic fatigue syndrome
- fibromyalgia
- inflammatory bowel disease
- persistent headaches
- continuous lower back pain

In some cases, chronic pain may even be exacerbated by sleep disorders. For instance, doctors believe the development of fibromyalgia might be linked to sleeping problems.

vi) Stress and anxiety

Stress and anxiety often have a negative impact on sleep quality. It can be difficult for you to fall asleep or to stay asleep. Nightmares, sleep talking, or sleepwalking may also disrupt your sleep.

Your doctor will first perform a physical exam and gather information about your symptoms and medical history. They may also order various tests, including:

- **Polysomnography (PSG):** This is a lab sleep study that evaluates oxygen levels, body movements, and brain waves to determine how they disrupt sleep vs. home sleep study (HST) that is performed in your own and is used to diagnose sleep apnea.
- **Electroencephalogram (EEG):** This is a test that assesses electrical activity in the brain and detects any potential problems associated with this activity. It's part of a polysomnography.
- **Multiple sleep latency test (MSLT):** This daytime napping study is used in conjunction with a PSG at night to help diagnose narcolepsy.

These tests can be crucial in determining the right course of treatment for sleep disorders.

f) Diagnosis

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g) Medical treatment

Medical treatment for sleep disturbances might include any of the following:

- sleeping pills
- melatonin supplements
- allergy or cold medication
- medications for any underlying health issues

- breathing device or surgery (usually for sleep apnea)
- a dental guard (usually for teeth grinding)

h) **Lifestyle changes**

Lifestyle adjustments can greatly improve your quality of sleep, especially when they're done along with medical treatments. You may want to consider:

- incorporating more vegetables and fish into your diet, and reducing sugar intake
- reducing stress and anxiety by exercising and stretching
- creating and sticking to a regular sleeping schedule
- drinking less water before bedtime
- limiting your caffeine intake, especially in the late afternoon or evening
- decreasing tobacco and alcohol use
- eating smaller low carbohydrate meals before bedtime
- maintaining a healthy weight based on your doctor's recommendations

Going to bed and waking up at the same time every day can also significantly improve your sleep quality. While you might be tempted to sleep in on the weekends, this can make it more difficult to wake up and fall asleep during the workweek.

h) Ayurveda Treatment for Anidra

1. Nidana parivarjana (avoidance of aetiological factors) - before starting medicine

for insomnia psychiatric, neurological condition and chronic medical illness need to be treated first and smoking, excessive consumption of caffeine, alcohol, excessive computer work or T.V. watching need to be avoided.

2. Panchakarma procedures followed by samana chikitsa (Palliative therapy)

i. Virecana (Purgation) with Eranda taila 10 - 20 ml with half glass of milk at night

ii. Abhyanga (body massage), Padabhyanga (foot massage), shiroabhyanga (head

massage) with medicated oils.

iii.shiirodhara with medicated liquids (milk/ water/ oils (Narayana taila) daily 45-90 minutes for 21 days

iv. Pichu with Ksheerabalsa taila/ Himas!gara taila

v. Takra dhara daily 45 minutes for 14 days

3. Drug therapy

Single Useful Herbs

Plant	Dose	vehicle	Duration
Aswagandha churna	3 to 5gm	Sugar and ghee before meal	7 days
Jatamansi churna	500 mg to 1gm	Milk after meal	7days
Brahmi churna	1 to 2gm	Milk	7days
Mandukparni churna	1 to 2gm	Milk	7 days

Table:1

Useful Ayurveda Drugs

Drug	Dose	Vehicle	Duration
Mamsyadi Kwatha	15 to 30 ml.	Water	7days
Brahmi Vati	125 to 250 mg.	Honey	7days
Sarpagandhadi Vati	125mg.	Milk	7days
Manas Mitra Vataka	125mg.	Milk	7days
Maha Kalyanaka Ghrita	6 gm	Warm milk/ Warm water	7 days
Narayan tail	For shirodhara	NA	21 days
Himasagar taila	For shirodhara	NA	7 days
Ksheera bala taila	For pichu	NA	14 days

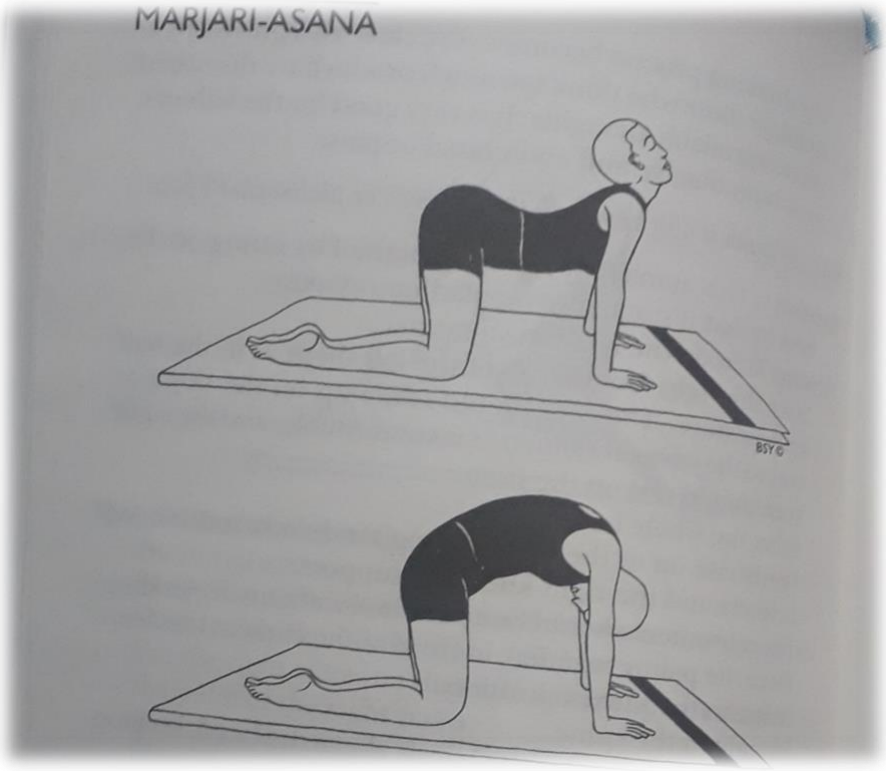
Table:2

NOTE-Medicines should be taken only in consultation with qualified Ayurveda physician either in combination of more than one drug or in the doses as decided by the physician depending upon the condition of the patient.

i) Yoga Treatment for Sleep disorder in female

i) Asana

A) Cat stretch (Marjariasana)



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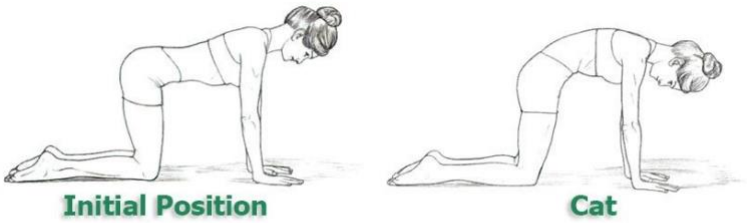
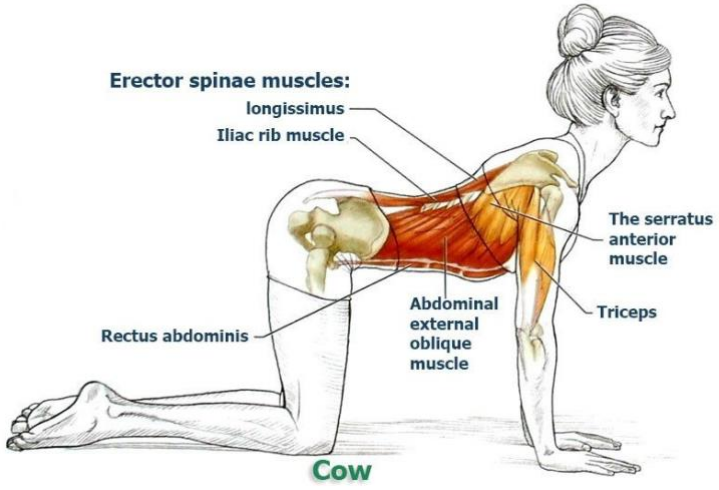
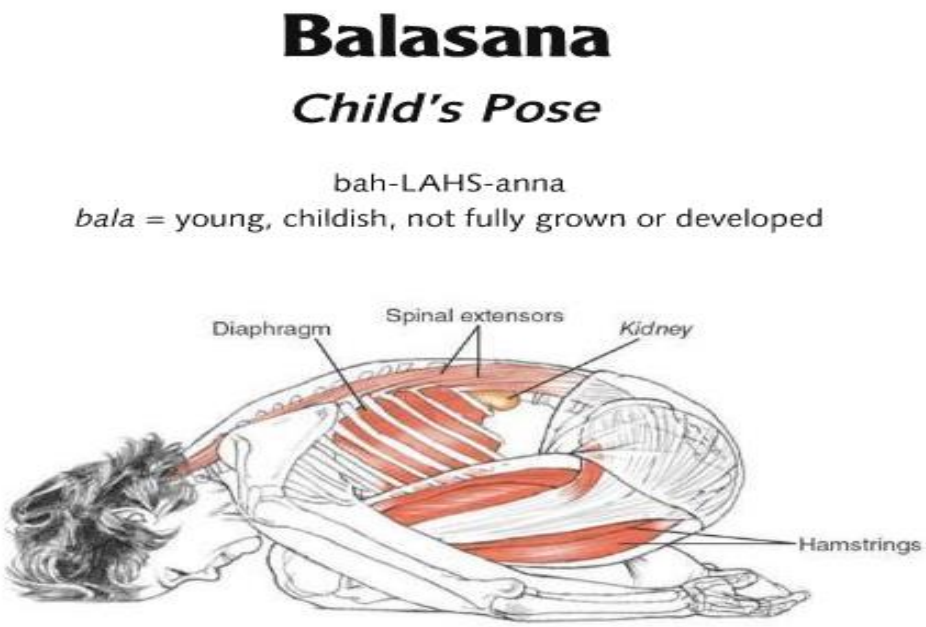
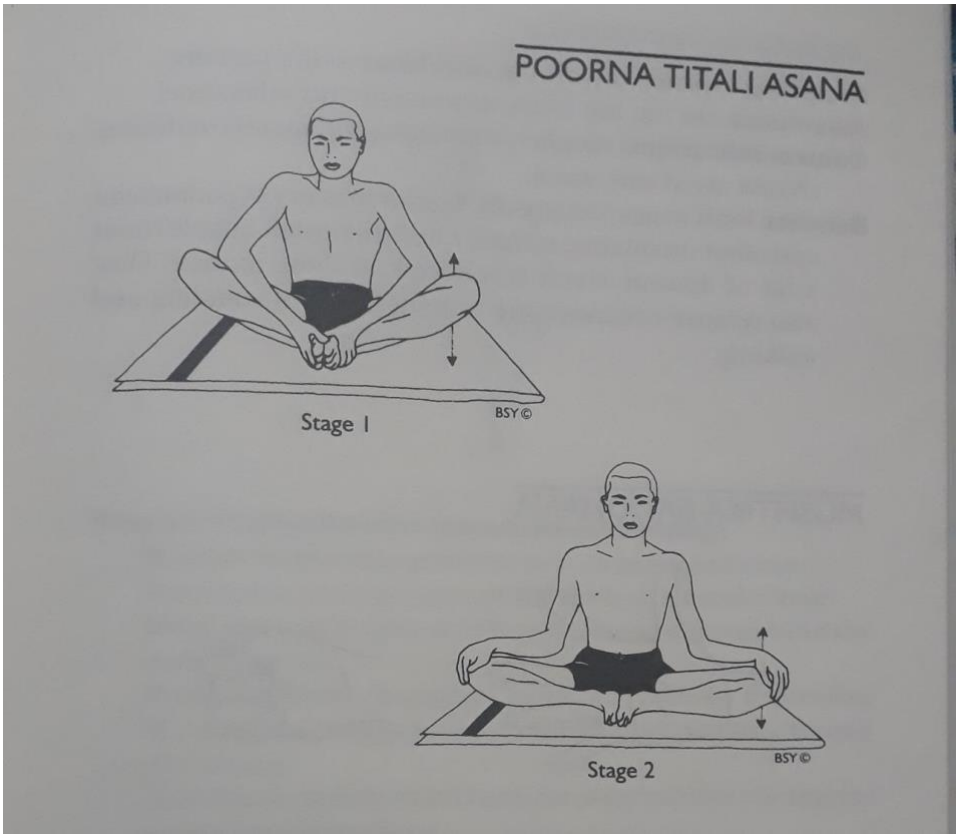




B) Child Pose (Shishuasana)



C) Butterfly pose



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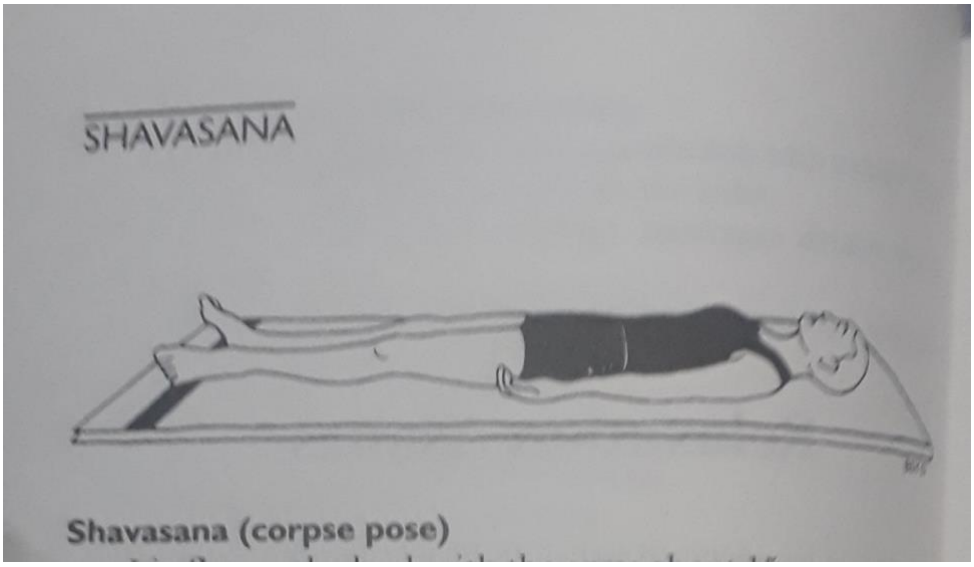
D) **Savasana asana**



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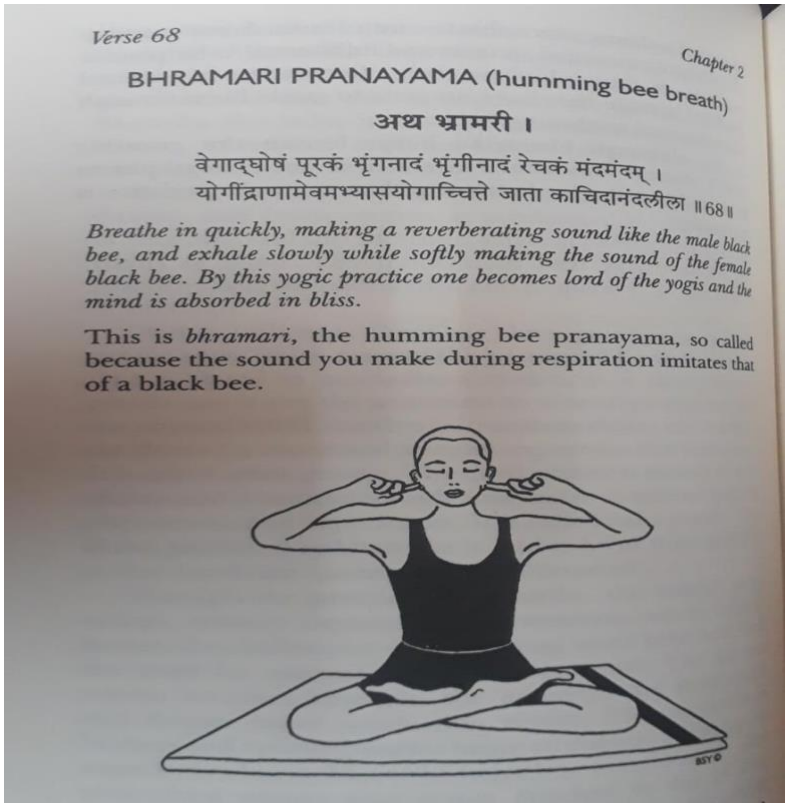
ii) Pranayama

A) Bhramri pranayama



Verse 68

Chapter 2

BHRAMARI PRANAYAMA (humming bee breath)

अथ भ्रामरी ।

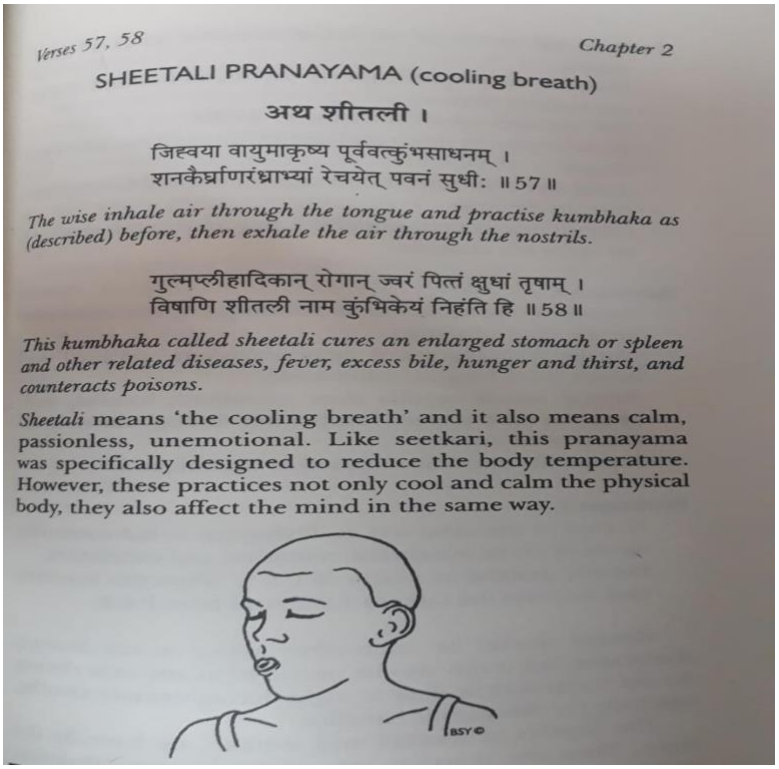
वेगाद्घोषं पूरकं भृंगनादं भृंगीनादं रेचकं मंदमंदम् ।
योगींद्राणामेवमभ्यासयोगाच्चित्ते जाता काचिदानंदलीला ॥ 68 ॥

Breathe in quickly, making a reverberating sound like the male black bee, and exhale slowly while softly making the sound of the female black bee. By this yogic practice one becomes lord of the yogis and the mind is absorbed in bliss.

This is *bhramari*, the humming bee pranayama, so called because the sound you make during respiration imitates that of a black bee.

(Ref….H.Y.P 2/68)

B) Sheetli



Verses 57, 58 *Chapter 2*

SHEETALI PRANAYAMA (cooling breath)

अथ शीतली ।

जिह्वया वायुमाकृष्य पूर्ववत्कुंभसाधनम् ।
शनकैर्घ्राणरंध्राभ्यां रेचयेत् पवनं सुधीः ॥ 57 ॥

The wise inhale air through the tongue and practise kumbhaka as (described) before, then exhale the air through the nostrils.

गुल्मप्लीहादिकान् रोगान् ज्वरं पित्तं क्षुधां तृषाम् ।
विषाणि शीतली नाम कुंभिकेयं निहंति हि ॥ 58 ॥

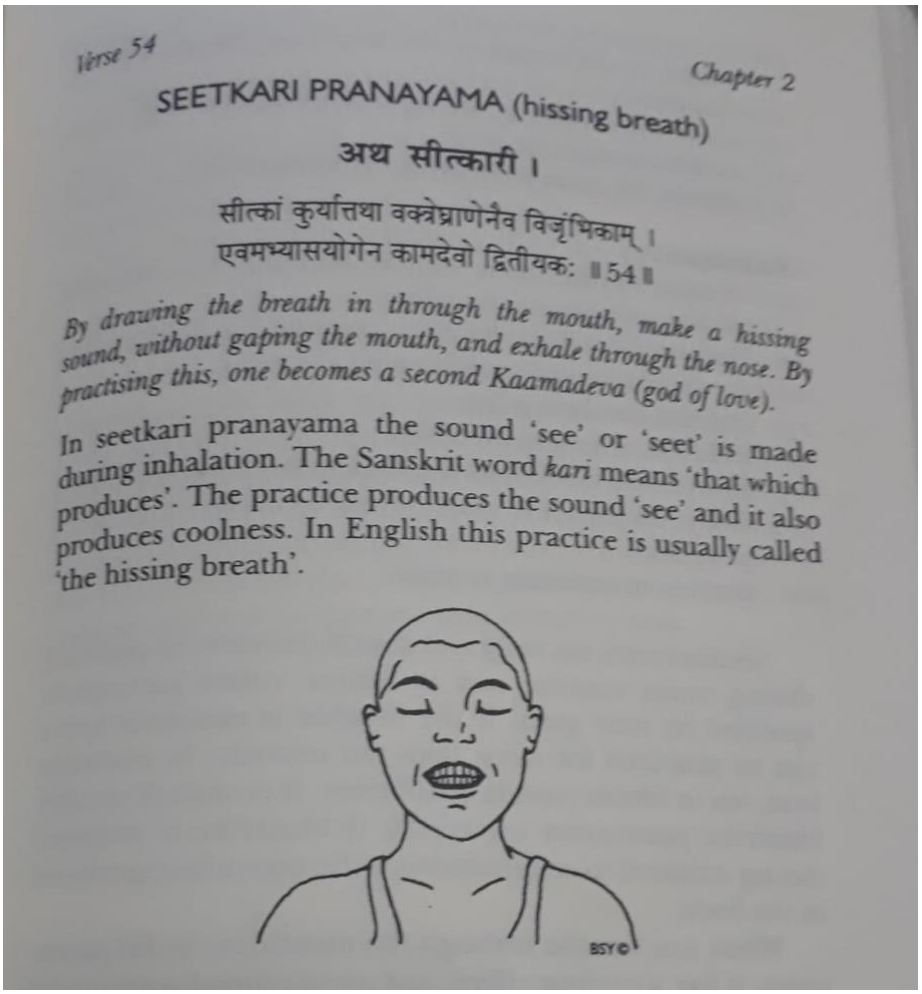
This kumbhaka called sheetali cures an enlarged stomach or spleen and other related diseases, fever, excess bile, hunger and thirst, and counteracts poisons.

Sheetali means 'the cooling breath' and it also means calm, passionless, unemotional. Like seetkari, this pranayama was specifically designed to reduce the body temperature. However, these practices not only cool and calm the physical body, they also affect the mind in the same way.

BSY©

(Ref….H.Y.P. 2/57,58)

C) Shitkari



Verse 54 Chapter 2

SEETKARI PRANAYAMA (hissing breath)

अथ सीत्कारी ।

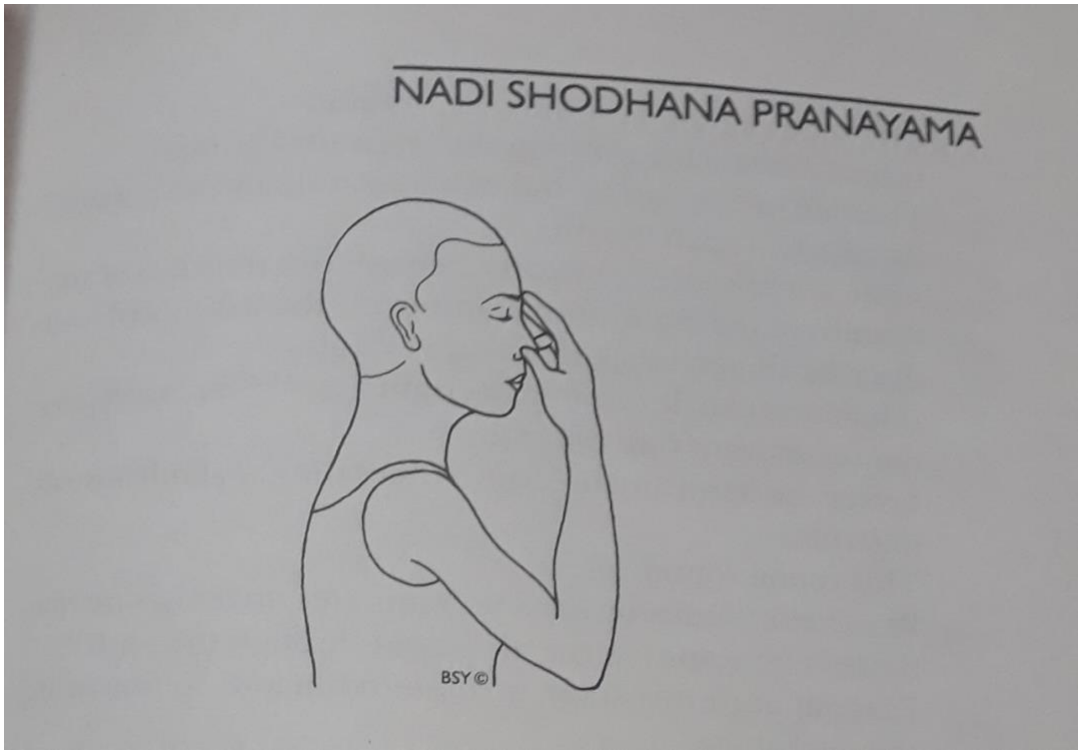
सीत्कां कुर्यात्तथा वक्त्रेघ्राणेनैव विजृंभिकाम् ।
एवमभ्यासयोगेन कामदेवो द्वितीयक: ॥ 54 ॥

By drawing the breath in through the mouth, make a hissing sound, without gaping the mouth, and exhale through the nose. By practising this, one becomes a second Kaamadeva (god of love).

In seetkari pranayama the sound 'see' or 'seet' is made during inhalation. The Sanskrit word *kari* means 'that which produces'. The practice produces the sound 'see' and it also produces coolness. In English this practice is usually called 'the hissing breath'.

(Ref….H.Y.P .2/54)

D) Nadi sodhan



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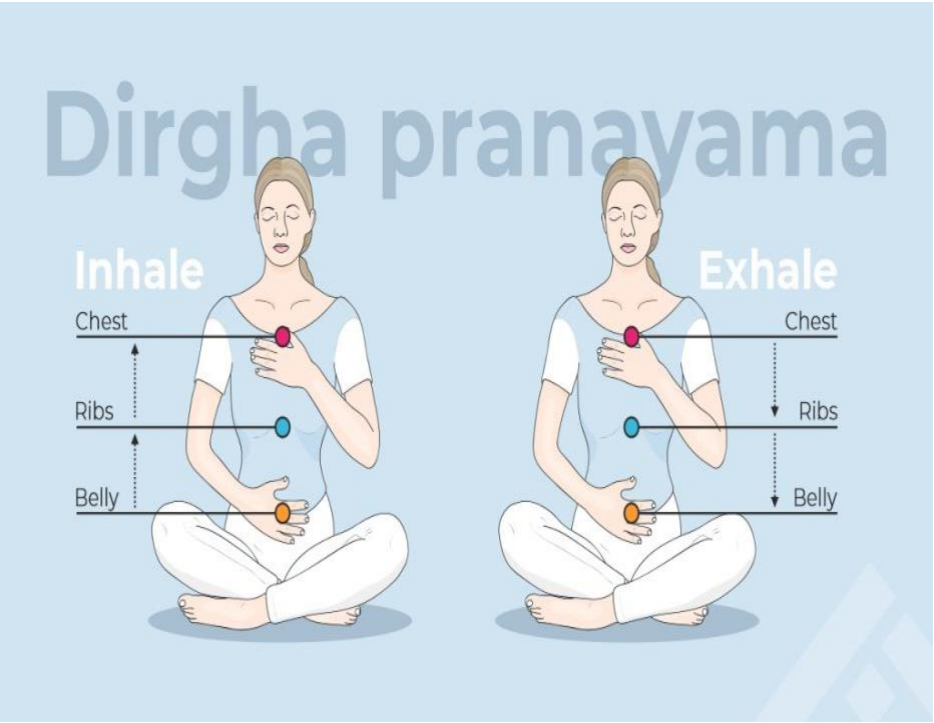
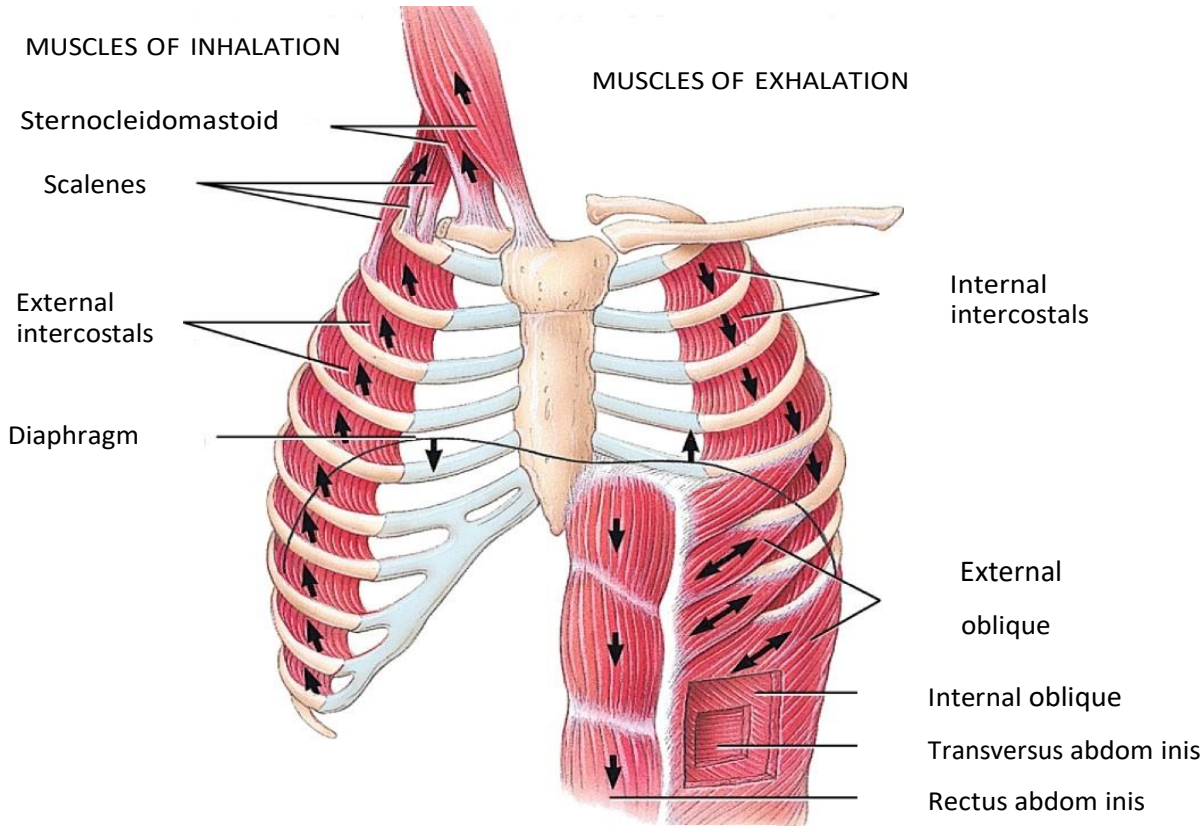
E) Yogic Breathing



i) Mechanism of Yogic breathing or pranayam

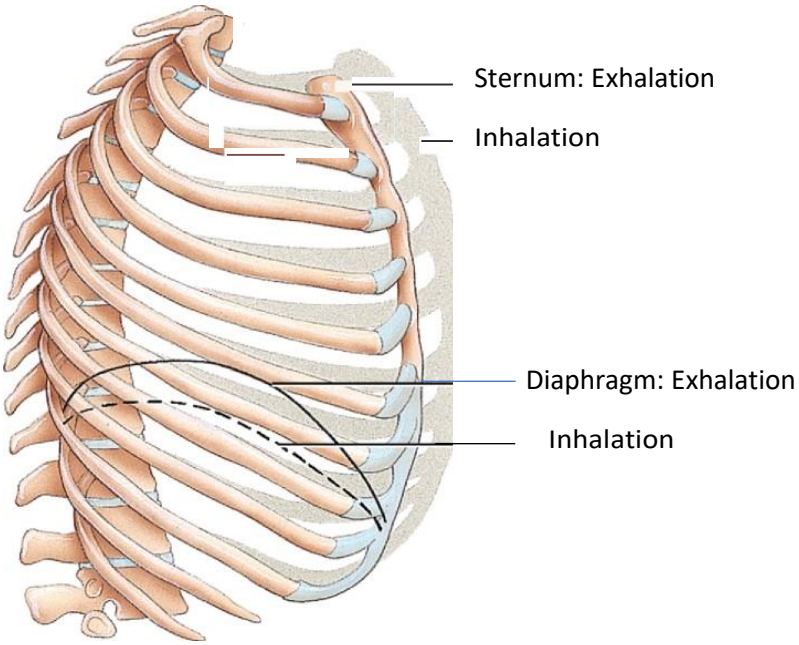


(a) Muscles of inhalation and their actions (left); muscles of exhalation and their actions (right)

Fig:1

(b) During inhalation, the ribs move upward and outward like the handle on a bucket

Fig:3



(c) Changes in size of thoracic cavity during inhalation and exhalation

Fig:2

3 Levels of Respiration

• Movement of air into and out of the lungs. Exchange of gases between the air in the lungs and the blood – Oxygen moves into the blood – Carbon dioxide moved out the blood and into the air on expiration. Exchanges of gases between the blood and the tissues – Oxygen moves into the tissue – Carbon dioxide moves into the blood to be returned to the lungs

Muscles of Breathing: The main muscle of breathing is the diaphragm. • Contraction of the diaphragm is responsible for 75% of the air coming into the lungs. • The other 25% of the air coming into the lungs is a result of the expansion of the ribs. The main muscles responsible for movement of the rib's outward are the external intercostals

Accessory Muscles: Additional muscles can also be recruited to assist in breathing especially during extreme conditions such as vigorous exercise, disease states, and respiratory attacks. Scalene muscles, the sternocleidomastoid muscle, and pectoralis minor

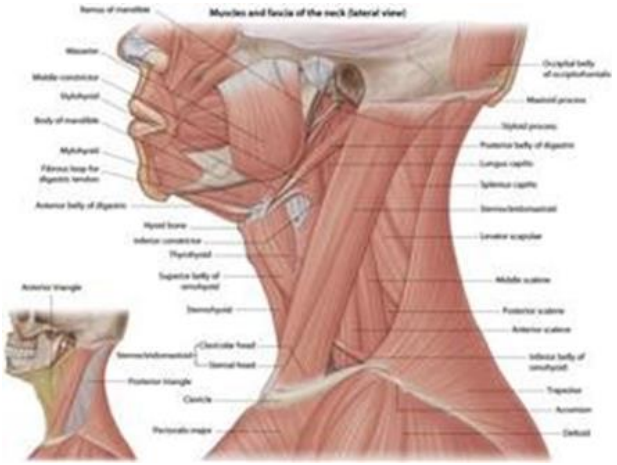


Fig:4

Mechanics of Breathing: Inhalation is voluntary and requires energy. In order for air to move from the atmosphere into the lungs the pressure must change. Air pressure inside lungs must drop to draw air into them – Lungs expand – Contractions of diaphragm and external intercostals; diaphragm drops – Thoracic cavity expands, and pleura and lungs are pulled outward

The Diaphragm: The primary muscle of breathing after the heart it can be considered the most important muscle of the body. It has few proprioceptive nerve endings so there is very little voluntary control of this muscle. Can you train the diaphragm?

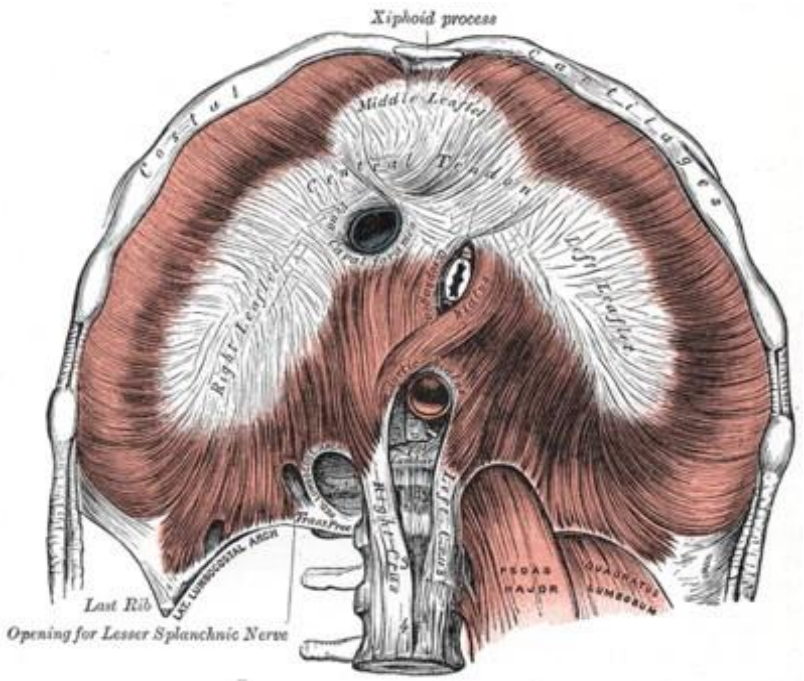

Xiphoid process
Middle Leaflet
Central Tendon
Right Leaflet
Left Leaflet
Last Rib
Opening for Lesser Splanchnic Nerve

Fig:5

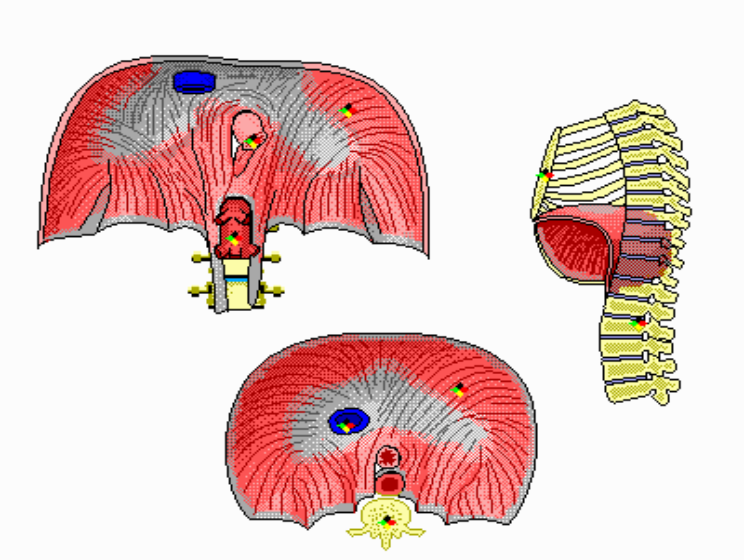


Fig:6

Exhalation: Exhalation, for the most part, is passive and requires no energy. Normal exhalation – Relaxation of external intercostals – Recoil of elastic fibers in diaphragm and within air passageways – Thoracic cavity becomes smaller – Pressure inside the thoracic cavity exceeds atmospheric pressure and air is forced out of the lungs. Forced exhalation – Abdominal and internal intercostals are recruited when you control the exhalation

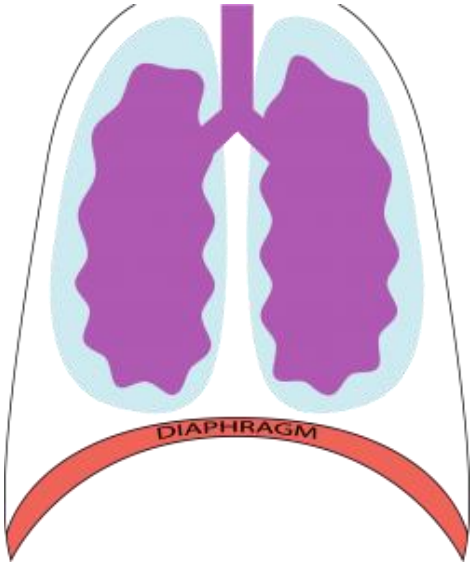


Fig:7

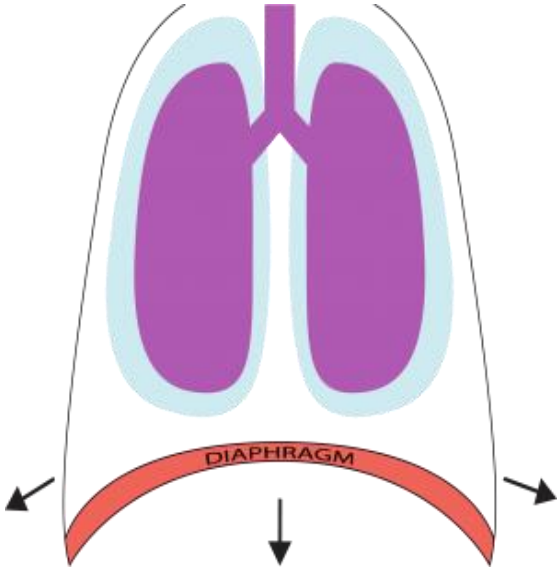


Fig:8

Breath Control: Breathing can be controlled voluntarily, up to a point in yoga breath control is known as pranayama Internally the control of breathing is regulated by the level of carbon dioxide in the blood, not oxygen. Too much CO_2 and H^+ will stimulate inspiratory area, phrenic and intercostal nerves. There are sensors throughout the body, which detect the levels of CO_2 and send messages to the brain to start breathing

F) Kriya

i) LSP (Laghu Shanka Prakshalana)

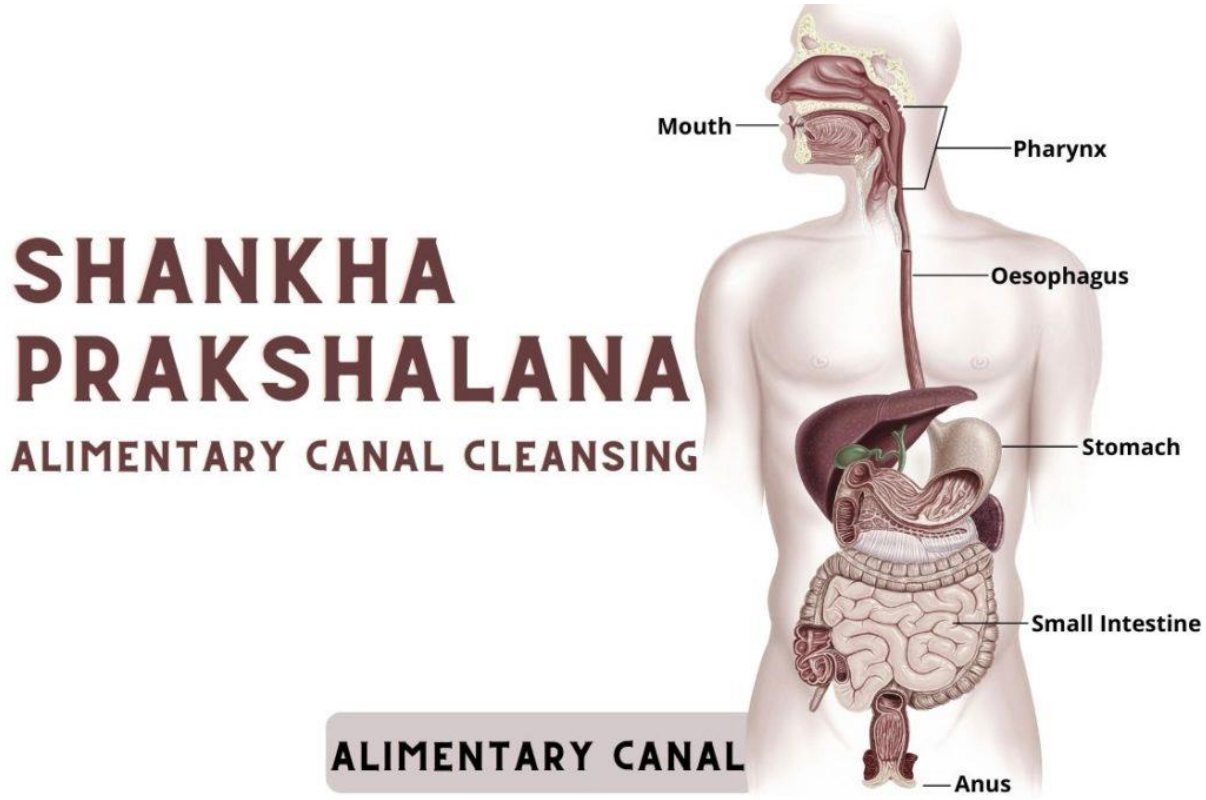


Fig:1

ii) Bouman dhauti

Lifestyle Modifications

- Exercise
- Reduce bedroom distractions
- Avoid substances that discourage sleep
- Keep a regular sleep schedule
- Develop a bedtime routine
- Diet

6. Part-2: EXPERIMENT

Research Design: Experimental research

Population: 10

Sampling method:

Sample Size: 2

Place: Home

Study Design: Pre-post design.

Simple random sampling

Clinical Presentation –

6.1 SELECTION CRITERIA

Inclusion criteria

Age: 40-60 years

Gender: female

health status: Hypertension since 3-year, menopause, Insomnia

social distancing: willing to have online session after consultation and also at home

physical examination: blood pressure, headache

Exclusion criteria

Age: 18-39

Gender: male

Health status: regularity of menstruation cycle, good sleep, normal blood pressure

Physical examination: BP >140/90, no headache

6.2 Data extraction or study design

Sample were collected by simple random sampling selection of interested people. We selected 2 sample sizes from 10 population after selection criteria from the experimental group. The pre data collection happened on 05/05/2021 for both the groups. Post data collection on 02/07/2021

6.3 PARAMETERS-

General parameters are shown in the table-1.

The study procedure is summarized by a case reporting format. Selected Patients with sleep disturbance were examined at home by me under expert's guidance. Relevant history was taken and a physical examination was done. The patients with sleep disturbance were

diagnosed myself and referred to our experts. Sleep disturbance patients who met the inclusion criteria were given a plain yoga nidra as therapy, Pranayam and asana on them. The questionnaire consisted of 16 items.

Heart rate, respiratory rate, body mass index, bhramari time,

List of parameters:

PARAMETERS	NORMAL RANGE
Height,	NIL
Weight,	NIL
BMI,	18.5-25
Pulse rate,	72 beats/ min.
Respiratory rate,	12-16
Blood pressure	120/80
Oxygen Saturation rate,	95-100
Body temperature	97-99
blood glucose level.	70-99 (Fasting) <140 (1-2hr after meal)

.

Specific parameters are shown in the table-2.

Sleep

6.4 INTERVENTION

Medication: BP pill, sleeping pill

Sound therapy: Bell meditation

Yoga asana: pawanmukta asana, Wide-Knee Child's Pose (*Balasana*)Yoga nidra, Standing Forward Bend (*Uttanasana*), Reclining Bound Angle (*Supta Baddha Konasana*), Corpse Pose (Savasana),

Pranayam
Bhramri, nadi sodhana, Yogic breathing, sheetali

Bhramari & mindfulness 20 round twice a day. Diet and daily walk are common for 8 weeks.

Diet: Green Leaves, less amount of Rice, Increase the quantity of chapati, avoid oily or Junk food

Yogic counselling

6.4.1 Statistical analysis

We didn’t have sufficient data, so we are given the raw data in table form

6.4.2 Results

Date(dd/mm/yy)	05/05’21	05/06/’21	05/07/’21	
Height(cm)	146	NIL		
Weight(kg)	66.20	NIL		
Body mass index(kg/m^2)	31.1	NIL		
Pulse rate(bpm)	87	83	88	
Respiratory rate(cpm)	19	21	21	
Blood pressure(mmHg)	140/90	129/86	136/92	
Oxygen saturation rate (%)	95	98	98	
Body temperature				
Blood glucose level (mg/dl)	Nil			

Table:1

Date(dd/mm/yy)				
Height(cm)	146	146	146	
Weight(kg)	44.7	44.7	44.7	
Body mass index(kg/m^2)	21	21	21	
Pulse rate(bpm)	82	78	73	
Respiratory rate(cpm)	19	18	15	
Blood pressure(mmHg)	125/80	102/60	120/78	

Oxygen saturation rate (%)	98	96	99	
Body temperature				
Blood glucose level (mg/dl)				

Table:2

Patient no.1

6.4.3 Sleep Disorders Questionnaire

This questionnaire is a screening tool for physicians to assist their clinical evaluation of insomnia. It can be used to screen for a sleep disorder. See page 2 for guide to interpreting the questionnaire.

The physician should perform a more detailed clinical evaluation and/or refer to specialist when appropriate.

Grade your answer by circling one number for each of the following questions:		Grading Scale				
		Never	Rarely	Occasionally	Most Night/days	
1	Do you have trouble falling asleep?	1	2 *	3	4	5
2	Do you have trouble staying asleep?	1	2	3 *	4	5
3	Do you take anything to help you sleep?	1 *	2	3	4	5
4	Do you use alcohol to help you steep?	1 *	2	3	4	5
5	Do you have any medical conditions that disrupt your sleep?	1	2	3	4 *	5
6	Have you lost Interest In hobbies or activities?	1 *	2	3	4	5
7	Do you feel sad, Irritable, or hopeless?	1	2 *	3	4	5
8	Do you feel nervous or worried?	1	2 *	3	4	5
9	Do you think something is wrong with your body?	1	2 *	3	4	5

10	Are you a shift worker or Es your sleep schedule Irregular?	1	2 *	3	4	5
11	Are your legs restless and/or uncomfortable before bed?	1	2 *	3	4	5
12	Have you been told that you are restless or that you kick your legs In your sleep?	1	2	3 *	4	5
13	Do you have any unusual behaviours or movements during sleep?	1 *	2	3	4	5
14	Do you snore?	1	2	3 *	4	5
15	Has anyone said that you stop breathing, gasp, snort, or choke in your sleep?	1 *	2	3	4	5
16	Do you have difficulty staying awake during the day?	1 *	2	3	4	5

Patient no.2

6.4.4 Sleep Disorders Questionnaire

This questionnaire is a screening tool for physicians to assist their clinical evaluation of insomnia. It can be used to screen for a sleep disorder. See page 2 for guide to interpreting the questionnaire.

The physician should perform a more detailed clinical evaluation and/or refer to specialist when appropriate.

Grade your answer by circling one number for each of the following questions:		Grading Scale				
		Never	Rarely	Occasionally	Most Night/days	
1	Do you have trouble falling asleep?	1	2*	3	4	5
2	Do you have trouble staying asleep?	1*	2	3	4	5
3	Do you take anything to help you sleep?	1*	2	3	4	5
4	Do you use alcohol to help you steep?	1*	2	3	4	5
5	Do you have any medical conditions that disrupt your sleep?	1	2*	3	4	5
6	Have you lost Interest In hobbies or activities?	1	2*	3	4	5
7	Do you feel sad, Irritable, or hopeless?	1	2*	3	4	5
8	Do you feel nervous or worried?	1	2	3*	4	5
9	Do you think something is wrong with your body?	1*	2	3	4	5
10	Are you a shift worker or Es your sleep schedule Irregular?	1	2*	3	4	5
11	Are your legs restless and/or uncomfortable before bed?	1	2*	3	4	5
12	Have you been told that you are restless or that you kick your legs In your sleep?	1*	2	3	4	5
13	Do you have any unusual behaviours or movements during sleep?	1	2*	3	4	5
14	Do you snore?	1*	2	3	4	5

15	Has anyone said that you stop breathing, gasp, snort, or choke in your sleep?	1	2*	3	4	5
16	Do you have difficulty staying awake during the day?	1	2	3*	4	5

6.4.5 Diagnosing Domains:

1) **Insomnia: Q I-5**
2) **Psychiatric Disorders: Q 6-9**
3) **Circadian Rhythm Disorder: Q IO**
4) **Movement disorders: Q11-12**
5) **Parasomnias Q 13**

7. **Results**: Here we see that there is a no change in the blood pressure of 2nd patient but in case of 1st patient the blood pressure vary, sometimes it increases sometimes it goes normal or fall in. Another side in patient no 1 **'insomnia'** has been seen but there is no psychiatric, circadian rhythm, movement etc. disorders are not seen. There is no sleep disorder has been seen according to questionnaire in patient no.2.Therefore here we see good result in patient no.2 but slight behavioural change in patient no.1 otherwise no change in above parameters.

8.

9. **Discussion**:

Breath holding means the retention of breath after inhalation improved. So, the diaphragm contraction (Isometric) improved by 13 weeks in the present study. Women has many types of stress like house work stress, office stress, children's study stress etc. that's why we use Nadi sodhana pranayama because its settles the nervous system, helps to lower blood pressure , quits the mind and lead to reducing stress, anxiety in this experiment we see that the 2nd patient getting good result .According to the questionnaire we see that patient no.1 have insomnia and sleep apnea but there is no psychiatric disorder, no circadian rhythm disorder, movement disorder and parasomnia. In case patient no. 2 Parasomnia has been seen but other disease of sleep is not seen. In insomnia stress, anxiety and digestion problem are common, to reduce stress and anxiety we focus on yoga nidra and we also do LSP to fight with digestive problem and suggest for good diet

10. **Conclusion: Yognidra** is beneficial in improving multiple dimensions of female. **bhramri** is also good and very beneficial in sleep disturbance specially in female due to its positive humming sound wave.

11. **Limitations:**

- Small sample size
- Blood sample was not tested due to covid lockdown situation
- Lack of interaction with patient due to covid-19 online treatment and suggestion were suggested by following the protocol of Indian govt.

12. **Strengths And Further Research:**

- The patients have shown great cooperation towards the yoga asana and the pranayama technique and follow all the steps properly**.**
- The examination or special test are used in the present study can be repeated for the long-term and large sample size.

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annexure:1 sleep disorder questionnaire

Sleep Disorders Questionnaire

This questionnaire is a screening tool for physicians to assist their clinical evaluation of insomnia. It can be used to screen for a sleep disorder. See page 2 for guide to interpreting the questionnaire.

The physician should perform a more detailed clinical evaluation and/or refer to specialist when appropriate.

Grade your answer by circling one number for each of the following questions:		Grading Scale				
		Never	Rarely	Occasionally	Most Nights/Days	Always
1	Do you have trouble falling asleep?	1	2	3	4	5
2	Do you have trouble staying asleep?	1	2	3	4	5
3	Do you take anything to help you sleep?	1	2	3	4	5
4	Do you use alcohol to help you sleep?	1	2	3	4	5
5	Do you have any medical conditions that disrupt your sleep?	1	2	3	4	5
6	Have you lost interest in hobbies or activities?	1	2	3	4	5
7	Do you feel sad, irritable, or hopeless?	1	2	3	4	5
8	Do you feel nervous or worried?	1	2	3	4	5
9	Do you think something is wrong with your body?	1	2	3	4	5
10	Are you a shift worker or is your sleep schedule irregular?	1	2	3	4	5
11	Are your legs restless and/or uncomfortable before bed?	1	2	3	4	5
12	Have you been told that you are restless or that you kick your legs in your sleep?	1	2	3	4	5
13	Do you have any unusual behaviours or movements during sleep?	1	2	3	4	5
14	Do you snore?	1	2	3	4	5
15	Has anyone said that you stop breathing, gasp, snort, or choke in your sleep?	1	2	3	4	5
16	Do you have difficulty staying awake during the day?	1	2	3	4	5

Sleep Disorders Questionnaire

See page 2 for guide to interpreting the questionnaire.

GUIDE TO INTERPRETING THE INSOMNIA SCREENING QUESTIONNAIRE

DIAGNOSTIC DOMAINS:

1) Insomnia: Q1-5
2) Psychiatric Disorders: Q6-9
3) Circadian Rhythm Disorder: Q10
4) Movement disorders: Q11-12
5) Parasomnias Q13

GENERAL GUIDELINES FOR INTERPRETING THE GRADING SCALE

1) Grading of 3, 4 or 5 on any question, the patient likely suffers from insomnia. If they answer 3, 4 or 5 for two or more items and have significant daytime impairment the insomnia requires further evaluation and management.
2) Grading 4 or 5 on questions 6-9 require further screening for psychiatric disorders. Question 8 refers to somatization and may reflect an underlying somatoform disorder which requires specific treatment.
3) Grading 4 or 5 on question 10 may be a circadian rhythm disorder. Further questioning about shift work or a preference for a delayed sleep phase should be done.
4) Grading 4 or 5 on question 11 or 12 is significant and likely contributing to the patient's symptoms of insomnia or non-restorative sleep. Question 11 refers to restless legs syndrome and question 12 refers to periodic limb movement disorder.
5) Grading 2-5 on question 14 should raise concern especially if the event or movement is violent or potentially injurious to the patient or bed partner.
6) Grading 4 or 5 on question 14 or 15 alone require further clinical evaluation for sleep apnea. Grading above 3 on questions 14 and 15 or 14 and 16 is also suspicious for sleep apnea and further evaluation should be done.

Insomnia Severity Index

The Insomnia Severity Index has seven questions. The seven answers are added up to get a total score. When you have your total score, look at the 'Guidelines for Scoring/Interpretation' below to see where your sleep difficulty fits.

For each question, please CIRCLE the number that best describes your answer.

Please rate the CURRENT (i.e. LAST 2 WEEKS) SEVERITY of your insomnia problem(s).

Insomnia Problem	None	Mild	Moderate	Severe	Very Severe
1. Difficulty falling asleep	0	1	2	3	4
2. Difficulty staying asleep	0	1	2	3	4
3. Problems waking up too early	0	1	2	3	4

4. How SATISFIED/DISSATISFIED are you with your CURRENT sleep pattern?

Very Satisfied	Satisfied	Moderately Satisfied	Dissatisfied	Very Dissatisfied
0	1	2	3	4

5. How NOTICEABLE to others do you think your sleep problem is in terms of impairing the quality of your life?

Not at all Noticeable	A Little	Somewhat	Much	Very Much Noticeable
0	1	2	3	4

6. How WORRIED/DISTRESSED are you about your current sleep problem?

Not at all Worried	A Little	Somewhat	Much	Very Much Worried
0	1	2	3	4

7. To what extent do you consider your sleep problem to INTERFERE with your daily functioning (e.g. daytime fatigue, mood, ability to function at work/daily chores, concentration, memory, mood, etc.) CURRENTLY?

Not at all Interfering	A Little	Somewhat	Much	Very Much Interfering
0	1	2	3	4

Guidelines for Scoring/Interpretation:

Add the scores for all seven items (questions 1 + 2 + 3 + 4 + 5 +6 + 7) = _____ your total score

Total score categories:
0–7 = No clinically significant insomnia
8–14 = Subthreshold insomnia
15–21 = Clinical insomnia (moderate severity)
22–28 = Clinical insomnia (severe)

STOP-Bang questionnaire

☐ Yes	☐ No	**Snoring?** Do you **snore loudly** (loud enough to be heard through closed doors, or your bed partner elbows you for snoring at night)?
☐ Yes	☐ No	**Tired?** Do you often feel **tired, fatigued, or sleepy** during the daytime (such as falling asleep during driving)?
☐ Yes	☐ No	**Observed?** Has anyone **observed** you **stop breathing** or **choking/gasping** during your sleep?
☐ Yes	☐ No	**Pressure?** Do you have or are being treated for **high blood pressure**?
☐ Yes	☐ No	**Body mass index more than 35 kg/m^2?**
☐ Yes	☐ No	**Age older than 50 years old?**
☐ Yes	☐ No	**Neck size large? (measured around Adam's apple)** For male, is your shirt collar 17 inches or larger? For female, is your shirt collar 16 inches or larger?
☐ Yes	☐ No	**Gender = Male?**

Scoring criteria*:

For general population

Low risk of OSA: Yes to 0 to 2 questions

Intermediate risk of OSA: Yes to 3 to 4 questions

High risk of OSA: Yes to 5 to 8 questions

OSA: obstructive sleep apnea

* For validated scoring criteria in obese patients, please refer to UpToDate topic on surgical risk and the preoperative evaluation and management of adults with obstructive sleep apnea.

References:

1. *Chung F, Yegneswaran B, Liao P, et al. STOP questionnaire: a tool to screen patients for obstructive sleep apnea. Anesthesiology 2008; 108:812.*
2. *Chung F, Subramanyam R, Liao P, et al. High STOP-Bang score indicates a high probability of obstructive sleep apnoea. Br J Anaesth 2012; 108:768.*

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Sleep Diary

Please complete this form each morning when you wake up

DATE Which night is being reported on?							
Measuring the pattern of your sleep							
1. What time did you wake up this morning?							
2. What time did you rise from bed this morning?							
3. What time did you go to bed last night?							
4. What time did you put the light out?							
5. How long did it take you to fall asleep?							
6. How many times did you wake in the night?							
7. How long were you awake during the night?							
8. How long did you sleep altogether?							
9. How much alcohol did you have last night?							
10. How many sleeping pills did you take?							
Measuring the quality of your sleep – for the last 2 questions, please answer using the scale below							
0 = not at all; 1 = slightly; 2 = moderately; 3 = quite a lot; 4 = very							
1. How well rested do you feel this morning?							
2. Was your sleep of good quality?							
Notes or comments (naps?)							

Helpful tips for keeping the sleep diary:

- **Do:** Complete your diary within 1 hour of getting up
- **Do:** Try to write down times to the nearest 5 to 10 minutes
- **Do:** Double check your answers
- **Don't:** Clock watch during the night
- **Don't:** Worry about it. It's just a record of your sleep!
- **Don't:** Make up answers. It's OK to leave it blank if you forget

From Colin Espie "Overcoming insomnia and sleep problems" London Robinson, 2006

annexure:2 Fig:1

annexure:3 Fig:2

annexure:4 Fig:3


12
3
6
9

Department of Yogic Art & Science

VINAYA-BHAVANA

(Institute of Education)

VISVA-BHARATI SANTINIKETAN

Notice

All the B.Sc. (Hons) in Yoga 6th Semester Students are hereby informed to to select a **Research Topic** according to their own interests, following the guidelines provided by Dr. Amaravathi E. and submit it to Dr. Amaravathi E. (om.amaravathi@gmail.com) within12.04.2021 at 6.00 P.M.

Also you can submit your topic in this Link: https://forms.gle/5vQJqjete2bWMEEf6

Head,
Department of Yogic Art & Science
Visva-Bharati, Santiniketan

Date: 08/04/2021