

# The Impact of Pranayama Practice on Physical and Mental Health in the Modern Era

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**Abstract:** *Our breath is not just a physical process; it is closely connected to our emotions and mental state. When our emotions change, our breathing pattern also changes. This connection works both ways. Just as emotions influence our breathing, controlled breathing can also influence our emotions. Thus, the rhythmic, uniform, slow, and harmonious breathing techniques involved in pranayama helps to develop a connection between body, mind and soul. It has profound positive impact on the nervous system with increased parasympathetic activity; helping in managing stress, anxiety, and depression. It influences the vagus nerve and key brain regions involved in emotional regulation. The regular practice of pranayama daily cleans the toxins from the cellular level, clears the pathways of energy channels for free flow of life force energy; which in turn nourishes and rejuvenates the cells and tissues. Hence pranayama supports in better functioning of the body systems, boosts immunity, enhances creativity, sharpens focus and mental clarity, creates inner peace and aligns to vibrate in harmony with the universe. Therefore, Pranayama is a holistic and effective therapy in improving one's physical fitness, including strength and endurance.*

**Key words:** Pranayama, Parasympathetic activity, stress, anxiety, depression, Vagus nerve, Brain, energy channels.

## 1. INTRODUCTION

Scientific Pranayama is the yogic practice of focusing on breath at the same time considering timing, duration of breath, and involvement of specific areas, muscles, etc. Pranayama is a Sanskrit word. "Prana" means (life force), and "Ayama" means (extension or control). As the breath is associated with prana, the pranayama has become a beautiful means to elevate the prana-shakti, or life energies, within us.

By regular practise of Pranayama, the prana shakti in the body increases, and this life force energy purifies the body and calms the mind. Due to the positive effect on the body and mind, in today's scenario all over the world, it is drawing the interest of researchers for its physical, emotional, psychological, and neurological benefits.

## 2. OBJECTIVE

To analyse and study the effects of Scientific Pranayama techniques on body and mind, especially in the case of women undergoing menopause. A woman undergoing menopause will experience changes at the physical, Emotional and Cognitive level. This happens due to hormonal changes.

### 2.1 Physical Changes

- **Hot flashes:** Sudden feelings of heat in the face, neck, and chest with profuse sweating.
- **Night sweats:** Similar to hot flashes but occurring during sleep.
- **Sleep problems:** Difficulty in falling asleep or staying asleep, insomnia, fatigue

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- **Urinary issues:** Increased urinary frequency, urgency, or incontinence.
- **Joint pain:** Increase in joint pain due to decline in estrogen, restless leg, and headache
- **Skin changes:** Skin may become drier or more prone to acne.
- **Changes in gut health:** Fluctuations in hormones leading to digestive changes.
- **Weight gain:** Changes in hormone levels affect metabolism and cause weight gain.

## 2.2 Emotional and Cognitive Changes:

- **Mood swings:** Changes in mood, including irritability, anxiety, and depression.
- **Forgetfulness:** Difficulty concentrating or remembering things, dizziness.
- **Brain fog:** Confusion, and difficulty finding words, and loss of self-esteem.

## 3. METHODOLOGY

To deal with Psychological outcomes (e.g., stress, anxiety, depression) and Cognitive performance (e.g., attention, memory) practised the following Pranayama in the same order as taught by Dr. Devaki Madhav, the founder of Scientific Pranayama Trust, Mysuru.

- **Bhastrika** (Bellows Breath) – (5 minutes)
- **Kapalabhati** (Skull Shining Breath) (5 minutes)
- **Sheetali** (Cooling Breath) - (Based on the weather 3 times)
- **Bahya Kumbhaka** (External Breath Retention) – (5-10 times)
- **Ujjayi** (Victorious Breath) – (5 minutes)
- **Nadi Shodhana** (Alternate Nostril Breathing) – (10 minutes)
- **Bhramari** (Humming Bee Breath) – (10 times)
- **Pranava Pranayama** (Omkar chanting) – (5-10 minutes)

## 4. KEY FINDINGS

### 4.1. Reduction in Stress and Anxiety

- I had to deal with Office work pressure, travel, find time to cook for myself, and give time to my family members. During menopause, one gets irritated due to changes in hormones, loose temper, become angry. But the regular practice of Scientific Pranayama helped me to keep my mind calm by activating the parasympathetic nervous system.
- At the office, in tough situations, most of my colleagues compliment me; how come I can be so poised and deal with staff and people with calmness as though no issues existed. Every day, I could get back to the office with fresh new energy.

### 4.2. Improvements in Emotional Regulation

- **Bhramari Pranayama** helped me in dealing with anger and irritability. Thus, my colleagues saw me with balanced mind and emotional stability.

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#### 4.3. Enhancement of Cognitive Function

- I completed my Scientific Pranayama course which was one-year duration along with my hectic job. It was **Anuloma Viloma** which helped me focus on my studies otherwise it was difficult to concentrate when the mind is so preoccupied with office task and meeting the deadlines.
- I could do multitasking without forgetting; taking care of finer details while executing my task. It was evident when compliments started pouring in.
- At creativity level; I could create fresh new designs for my office magazine and plan beautiful backdrop for my SBI stalls meant for exhibition. When I look at my creativity, I feel amazed at myself and wonder whether it is me who can visualise so much.

#### 4.4. Mood and Depression

- **Bhastrika** pranayama helped me to maintain good health. It kept all cold, cough and fever at bay. Even sore throat got healed with Bhastrika. I didn't have to take antibiotics.
- **Ujjayi pranayama** helped me maintain my thyroid level under check. In the span of a year my thyroid medicine mg, I could bring down from 75mg to 50mg. With 50mg, it is well within the range. **Still working on it to further bring down the medicine.** Increased endorphin levels and improved oxygenation contributed to improved mood states.
- **Kapalabhati** cleared the toxins from my body. Morning I used to wake up like a feather weight, no heaviness, no cramps in the body. With so much of work on hand be it office or personal front; I never felt depressed. It was like an antidepressant dose.
- **Sheetali Pranayama** helped me to deal with hot flashes. Frequency of hot flashes reduced to bare minimum.

#### 4.5. Physical improvement

- **Bahya Kumbhaka** helped to fight with acnes. It improved my gut health thus showed good effect on my skin.
- Helped me to deal with Dengue. My Platelets levels were low. The Diagnostic Centre where I had given blood for test. They were shocked to see the report readings. They were confused whether they have carried out the examination correctly. They asked me to give blood again for the test. Thought the platelets were low, I didn't have tiredness, my energy levels were as usual.

### 5. CONCLUSION

It is very evident that **Scientific pranayama has a positive effect on physical, mental and emotional health.** It helps in managing stress, anxiety, depression, improvements in cognitive functioning and overall holistic well-being at each phase of one's life.

- **Mindfulness and Interoception:** Conscious breathing enhances awareness of internal bodily states, improving self-regulation.
- **Vagus Nerve Stimulation:** Breathing techniques stimulate the vagus nerve, promoting calmness and well-being.
- **Autonomic Nervous System Balance:** Pranayama restores the balance between the sympathetic (fight-or-flight) and parasympathetic (rest-and-digest) systems. Thus, has a soothing impact on the entire nervous system.

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- **Cell rejuvenation:** Helps in the activation of stem cells circulation for healing the body naturally.

**The other effects of Pranayama**

- ▶ **Energy channels open.** Pranayama acts like cleaning and regulating the efficiency of nerve pathways, Circulatory system, lymphatic flow and bioelectrical communication in the body, allowing energy to move smoothly in the body.
- ▶ **Maintains body Alkaline.** Reduces stress hormones and carbonic acid in blood to maintain pH level. Otherwise acidic body becomes habitat for cancer cells to grow.
- ▶ **Nurtures Natural Probiotic in the Gut.**
- ▶ **Gut Health improves** (No smelly poop, no constipation)
- ▶ **Food absorption improves.** Good level of hemoglobin and vitamin levels noticed. (Otherwise, many of them have Vitamin B12 and D deficiency).
- ▶ **Awareness about oneself. Mind becomes like a Smart Traffic Police; blocks unwanted thoughts** (Clears clutter and overthinking thus helps in time management).
- ▶ **Body a good receptor of Cosmic energy** (Intuition gets enhanced, mind comes up with good solution for the problems).
- ▶ **Balances Yin (Cooling) and Yang (Warming).**
- ▶ **Get aligned with Universe** (So you Wake up early in the morning without alarm).
- ▶ **Oral Health improves** (No bad breath, Teeth become strong and white).
- ▶ One gets **sound sleep, no disturbing dreams, no snoring.**
- ▶ **Able to fast** (no food, only drinking water). Body draws subtle nourishment from Prana.
- ▶ **No bad body odour.** Because toxins are efficiently eliminated via liver, kidney, urine and metabolism.
- ▶ **Restores Regular and painless menstrual cycle.**
- ▶ **Good body posture and feel good attitude.**
- ▶ **Quality of sound also improves.** Pranayama **supports the natural production of Melatonin.** Thus, **controls the body's internal clock** and promotes deeper, more restful sleep.

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