



Review Article

THE ROLE OF *KUNJAL KRIYA* IN UPPER RESPIRATORY TRACT DISORDERS W.S.R. TO BRONCHIAL ASTHMA

Shilpa Shankarrao Walkikar^{1*}, Shivakumar Harti²

¹Assistant Professor & HOD, Dept. of Swasthavritta, A & U Tibbia College & Hospital, Karolbagh, New Delhi.

²Associate Professor, Dept. of Swasthavritta, All India Institute of Ayurveda, Sarita Vihar, New Delhi, India.

Article info

Article History:

Received: 19-01-2023

Revised: 03-02-2023

Accepted: 23-02-2023

KEYWORDS:

Asthma, *Kunjal Kriya*,
Expectorant,
Vagus nerve.

ABSTRACT

Bronchial Asthma is one of the distressing ailments of the present time and is notable for its episodic and chronic course which influences the entire human race & it is a sickness of the human respiratory framework where the aviation routes get restricted. This limiting causes side effects, for example, wheezing, windedness, chest snugness, and hacking, which answer bronchodilators. *Kunjal Kriya* is the most straightforward technique among all types of *Dhouti*. The cleaning up of the whole track beginning from the mouth to the stomach related way toward the start of the small digestion tracts, that is mouth, and throat. Asthmatics might notice huge globs of mucus in the ousted water; the solid reflex from the pyloric valve will release bodily fluid discharges from the bronchial cylinders. *Kunjal Kriya* is suggested as a protected technique during an assault, as the strong activity of the vagus nerve delivers fit in the respiratory framework. Every day *Kunjal Kriya* is suggested for asthmatics under the arrangement of prepared instructors. In this review study, the author focused to rule out the mode of action of *Kunjal Kriya* in Upper Respiratory Tract Infections w.s.r. to Bronchial Asthma.

INTRODUCTION

The term "health" derives from comprehensiveness. Long ago, the *Yogis* who committed themselves to a path of introspection, an extra-terrestrial quest for significance in daily life, and the unfoldment of the full potential of humanity understood that the real foundation of the mission was a condition of brilliant health-not just the absence of illness, but an overflow, a flood of imperativeness and energy instead. They developed self-care and disease prevention measures so they could complete their job without being side-tracked by pain or illness. The fundamental procedures that make up the basic *Hatha yoga Shatkarmas*, or cleansing processes, provide the basis of these strategies. In addition to asana, *Pranayama*, creative meditation techniques, and relaxation techniques, these practices are taken into account by the comprehensive framework that is becoming known as Yoga Therapy.

As with most people, improving their digestive health is the key to better health. The entire body, including all of its systems, can be brought back to its regular condition of sound health through this doorway. Although the digestive tract is the focus of the *Kunjal Kriya*, its effects and consequences will be felt throughout the entire body. That is why some yogis developed the *Kunjal Kriya*, a straightforward method of back-flushing the stomach. They contend that to rebuild the mucus lining and remove any leftover food, one should flush the stomach each morning to start the day with a clean digestive system. Another name for this procedure is *Kunjal Kriya*.

Bronchial Asthma

Most individuals with bronchial asthma experience frequent wheezing bouts followed by periods of relatively regular breathing. But for other individuals with bronchial asthma, episodes of much more severe shortness of breath alternate with periods of chronic shortness of breath. One's genetic susceptibility to asthma, early exposure to indoor allergens such as house dust mites *Dermatophagoids pteronyssinus*, cockroaches' allergens, and a family history of asthma or allergy are all significant risk factors for the development of bronchial asthma. Exercise, cold weather, respiratory tract infections,

Access this article online	
Quick Response Code	
	https://doi.org/10.47070/ijapr.v11i2.2686
Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)	

stress, cigarette smoke, and other air pollutants i.e., sulphur dioxide, ozone, nitrogen oxides, and diesel particulates are just a few of the things that might cause or aggravate bronchial asthma attacks.

Some people can develop asthma in adulthood as a direct consequence of an intolerance to aspirin or other non-steroidal anti-inflammatory drugs i.e. NSAIDs that their bodies develop, in which case exposure to aspirin or NSAIDs can cause an asthma attack, or as a result of an allergy to certain chemicals in the workplace that they develop 'occupational asthma,' in which case exposure to the chemical provokes an asthma attack.

Prevalence and Incidence

The prevalence of asthma varies widely among countries and also within countries having different geographical distributions and socioeconomic statuses. Men and women are equally affected by it. Asthma affects between 5–10% of people worldwide at some point during their lives. Although the disease can strike at any age, it typically begins even before age of 10. In most affluent nations around the world, the prevalence of childhood asthma ranges from 8% to 30%, while this ranges from 0 to 5% in less developed nations. The Indian Study on Epidemiology of Asthma, Respiratory Symptoms, and Chronic Bronchitis in Adults (INSEARCH) estimated the national burden of asthma to be 17.23 million having an overall prevalence of 2.05%. The recent Global Burden of Disease (GBD, 1990–2019) estimated the total burden of asthma in India as 34.3 million, accounting for 13.09% of the global burden. It also attributed that 13.2 thousand deaths in India were due to asthma. The disease accounted for 27.9% of the disability-adjusted life year i.e. DALYs in Indians. Overall, India has three times higher mortality and more than two times higher DALYs compared to the global proportion of disease burden. Exacerbations and persistent symptoms that cause morbidity heavily strain individuals and their communities.^[1]

Pathogenesis

The atopic or reaginic kind of asthma is the larger of the two kinds. The current theory holds that now the pathophysiology of asthma is an ongoing inflammatory process where an IgE-mediated hypersensitivity reaction controls a series of events. Environmental antigens such as house dust mites *Dermatophagoids pteronyssinus*, and air pollutants like sulphur dioxide, ozone, nitrogen oxides, grass pollen, animal, dietary allergens, etc. cause severe conditions to manifest. Following exposure to the antigen, under the direction of particular T cells, B lymphocytes release a particular IgE. IgE binds to particular membrane receptors on mast cells and particular T lymphocytes. On the membranes of mast cells, basophils, eosinophils, macrophages, and platelets, IgE

binds to certain receptors. Histamine, slow-reacting substances (SRS-A), and eosinophilic chemotactic factor of anaphylaxis were activated by such a reaction and produced (ECF-A), and platelet-activating factor (PAF). Moreover, secondary mediators like prostaglandin and bradykinin play a significant part in the accumulation and activation of leucocytes particularly eosinophils which dominate the inflammatory picture of asthma. After exposure to antigen, B lymphocytes secrete specific IgE under the control of specific.

- Histamine --- broncho constriction +
- Increase in the bronchial secretion
- SRS – A --- prolonged bronchial constriction
- ECF – A --- selectively attracts eosinophils
- PAF --- aggravation of platelets
- Release of histamine and serotonin.

All of these factors lead to physical changes that clog the airways and make breathing more difficult like Wall irregularities, spasm-induced lumen narrowing, oedema submucosa, clogged blood vessels, and thickened basement membrane. The inability to fully exhale is connected to the obstruction of the bronchioles by viscid mucus, which is released as viscid secretion of eosinophils, desquamated epithelium, & thick mucus.

Symptoms

- Cough
- Chest tightness
- Wheezing
- Dyspnoea
- Inflammatory mediators that stimulate the sensory nerves produce coughing.
- Wheezing and tight chest are symptoms of airflow obstruction.
- Dyspnoea is a sign of increased respiratory work.
- Asthma symptoms include chest tightness in the morning or during the night, coughing, wheezing, or breathlessness that wakes you up.

Severe

- Continuous symptoms $\leq 60\%$ probability
- Frequent exacerbations variability $> 30\%$
- Frequent night-time asthma symptoms
- Physical activities limited by asthma symptoms

Moderate

- Symptoms daily
- Exacerbates affect activity and sleep $\geq 60\%$ - 80% probability
- Night time asthma symptoms > 1 time a week
- Variability $> 30\%$ Daily use of inhaled short-acting B2 – agonist.

Mild Persistent

Clinical features before treatment. $\geq 80\%$ predicted
Symptoms ≥ 1 time a week but < 1 time per day
Variability by 20–30%

Exacerbation may after activity a sleep

Night-time asthma symptoms > 2 times a month

Intermittent

Clinical features before treatment $\geq 80\%$ predicted

Intermittent symptoms < 1 time a week Variability
 $< 20\%$

Brief exacerbations (from a few hrs to a few days)

Night-time asthma symptoms < 2 times a month

Etymology of Kunjal

“Kunjal” is derived from the word “Kunjar”. According to the rule of *Nirukti* ‘r’ is converted into ‘l’.^[2]

Shatkarma i.e., *Dhauti*, *Basti*, *Neti*, *Nauli*, *Tratak*, *Kapalbhati* are not mentioned in ‘*Yogasutra*’ of Patanjali. *Shatkarma* details are available in *Hath Yoga* texts in which *Kunjal Kriya* is described as ‘*Gajkarani*’ as a type of *Antar Dhauti*.^[3] The word *Kunjar* is one of the synonyms of the elephant as per the indication of a different classic like *Shabdakalpadruma*, *Amrakosh*, *Sanskrit Hindi Kosh*, etc.^[4,5,6,7,8]

In an effort to keep itself healthy, the elephant repeatedly tries to get rid of dirt through its trunk while drinking water from it. Similar to how someone would drink water and then have to pass it out of their stomach, so too with *Kunjal Kriya*. As a result, *Kunjal Kriya* is the name of this procedure. The individual makes an effort to maintain one’s health by following this practice.^[9]

Means: Water is lukewarm and a little salt is added.^[10]

Position: Standing up straight and drinking the water.^[11]

Time: The ideal time for practice *Kunjal Kriya* is early in the morning before breakfast.^[12]

Method: Standing up straight, quickly drink at least six glasses of the prepared water, one after the other, until the stomach cannot hold anymore. This may seem difficult but it is essential to fill the stomach completely. On average, six glasses of water or two liters are sufficient to fill the stomach. When the stomach is full, the urge to vomit will come automatically. Lean forward, keeping the trunk parallel to the ground. Open the mouth and place the middle and index fingers of the right hand as far back on the tongue as possible. Gently rub and press the back of the tongue, moving the fingers slowly forward and backward. The water will be expelled without further effort. As this tends to release mucus into the nose, *Jala Neti* should be practiced after *Kunjal Kriya*.^[13]

Precautions: *Kunjal Kriya* should not be done for at least four hours after meals to allow sufficient time for

the stomach to empty. As it removes some of the stomach lining temporarily, it is advised to eat a light meal half an hour after completing the practice.^[14]

DISCUSSION

The pyloric sphincter, a muscle at the base or exit end of the stomach, is generally closed except when food is sent in waves down into the GI tract for additional digestion. But even so, when the sphincter receives a signal from the brain that the body needs to expel the contents of the stomach, perhaps due to bad food inside or because the abdomen is nauseous from an illness and does not want to digest the food which was fed, the sphincter and the surrounding muscles make a strong contraction in the reverse direction, forcing the stomach's contents up and out. The pyloric sphincter can be trained to be controlled consciously by first inducing a vomiting reflex with the fingers and then later by controlling the stomach. Similar to any other organ in the body, there is a build-up of deposits and disintegration due to use and abuse. As the substance accumulates on the stomach walls, it starts to function less effectively over time. *Kunjal Kriya*'s goal is to get rid of this accumulation and aid in getting the stomach lining back to functioning normally. The mucus linings of the lungs and trachea can get clogged with toxic wastes from smoking, mouth breathing, and poor diet, which can prevent them from functioning properly. A nerve response in the lungs that is activated when performing the *Kunjal Kriya* on the stomach aids in the removal of extra mucus and eases tension.

Previous research works on *Kunjal Kriya* are mentioned below. Chowdhury K, (2010), “Study on the effect of Some Indigenous Drugs on *Mukhadusika* with Special Reference to *Kunjar*”. Rajasthan Ayurveda University, Jodhpur, M.D. (Ayu.), Deptt. of Swasthavritta & Yoga. The outcome of this study is the process, *Kunjal* mainly acts on vitiated *Kapha*, *Agni*, and *Ama*- formation and thus, uproots the main causes of the disease thereby helping in breaking the pathogenesis. *Kunjal Kriya* when accompanied by internal medicine yields more effective improvement in controlling *Mukhadushika*.^[15]

Singh V, (1987). “*Kunjal*: A Nonspecific Protective Factor in Management of Bronchial Asthma”. The outcome is carried out to evaluate the role of warm saline water as a bronchoprotective factor in patients with asthma. Seven asthmatics used warm saline water as directed in a yogic procedure known as *Kunjal*. Substantial improvement was noticed in the asthmatic parameters with *Kunjal* not only during the first week but also in the week following the maneuver. This effect may be mediated through a reduction in the excitation of sensory irritants and vagal receptors in the throat and

oesophagus, resulting in reduced inflammation and an increase in the threshold of provocation.^[16]

Ragavendrasamy B, Nanjundaiah RM, Manjunath NK, (2018). "Voluntarily Induced Vomiting – A Yoga Technique to Enhance Pulmonary Functions in Healthy Humans". The outcome of the study is based on the findings from this study, it concludes that ViV when practiced regularly is expected to be a technique to enhance the endurance of the respiratory muscles and decrease airway resistance. These findings also indicate the possibility of using the practice of ViV in the management of motion sickness and restrictive pulmonary disorders like bronchitis and bronchial asthma.^[17]

Hakked CS, Ragavendrasamy B, Manjunath NK, (2017). "Yogic breathing practices improve lung functions of competitive young swimmers". Outcome is in accordance with earlier findings suggestive of resistive breathing training enhancing pulmonary capacities. The results suggest that YBP for 30 minutes a day along with routine physical exercises for five days a week, decreases airway resistance, increases respiratory muscle endurance, and the number of strokes per breath, possibly, through better autonomic reactivity, oxygen diffusion, and reduced anxiety in competitive swimmers.^[18]

Sharma N., Kumar H. (2021). "Effect of *Kunjla Kriya* and *Agastya Rasayan* in *Tamaka Shwasa* w.s.r. Bronchial Asthma- a case study". The outcome is that *Kunjla Kriya* expels out the vitiated Pitta dosha in the state of *Acchadita* from *Amashaya* and as a result, *jatharagni* becomes normal. The *Ama* formation and sequential events thus are restricted by the *Kunjla Kriya* and ultimately stop further pathogenesis of bronchial asthma.^[19]

Mahindra A, Gussain BS. (2022) "Yogic Effect of Respiratory Disorder". The outcome is in this study reduces asthma attacks, drug use, and improves peak flow rate.^[20]

Effect of *Kunjla Kriya* on the Respiratory System

Asthmatics can benefit tremendously from *Kunjla Kriya* since not only cleanses the stomach and oesophagus but also does a fantastic job of cleaning the lungs. The pyloric sphincter's powerful contractions and a vagus nerve shock wave can relieve the spasm in the bronchi and bronchioles. In fact, *Kunjla Kriya* is advised as an immediate solace for anyone sensing the beginning of an asthma attack. An asthmatic individual will experience fewer attacks over the course of many months if they practice *Kunjla Kriya* every morning. The *Kunjla Kriya* contraction keeps the respiration mechanisms open and enhances blood flow to the entire abdominal and thoracic region. The body can be thoroughly cleansed by salt. Everyone is familiar with how they feel after a satisfying ocean swim. The nose is clear, the lungs seem active, and the head feels clear.

This practice enables you to gain the same mucus-clearing benefits daily at home. It also aids in eradicating foul breath to cleanse the lungs and the circulation in the digestive system.

Direct Effects

On a physical level, *Kunjla Kriya* can support maintaining good health as well as support the treatment of Ectopic oesophageal mucosa, Chest infections, bronchial asthma, bronchitis, respiratory ailments, Acidity, stomach bloating, Biliary disorders, nausea, food poisoning, self-poisoning, indigestion, headaches, and neurological disorders. On a *Pranic* level, *Kunjla Kriya* causes the entire body to flush, loosen knots, and unblock *Nadis* i.e., the psychic nerve that conducts nerve, making the body feel revitalized and alive.

Indirect Effects

The nerve system is toned up and helped to rebalance by *Kunjla Kriya*, which has indirect benefits on rejuvenating the entire body. The *Pranic* flush's energy boosts the musculoskeletal, respiratory, urogenital, and circulatory systems. This is so that each system in the body may work properly and in balance. When one system, in this case, the digestive system, begins to overflow with energy, this power spills into the other body's compartments and recharges them. There is no distinction between the mind and body; they work together as one. Consequently, the mind also receives a recharge when the body does. This describes how physical methods can be used to treat mental illnesses. This idea can be applied to all yoga practices that infuse our lives with uplifting energy.

Physical Effects

During *Kunjla Kriya*, we activate the sensory receptors in our neurological system, which then signals the brain. The diaphragm, stomach, and glottis compress as a result, allowing the water to travel against gravity and sending a signal through the motor system to cause the body to vomit. For a brief while, three bodily processes completely paralyze the brain and mind, putting you in a "selfless" condition akin to that meditation. All thought and movement temporarily came to a standstill as a flood of energy poured through our bodies and mind. When the brain experiences this surge of energy, it is highly stimulated. Only a few of its most crucial circuits are operating because many of them have been temporarily cut. This circumstance is comparable to the Electric Shock Therapy used in hospitals to cure depressed people, although it is considerably gentler, subtler, and more successful. Every nerve in the brain is flooded with energy, but with *Kunjla Kriya*-as opposed to ECT-*Pranic* energy flows through, revitalizing and reviving every cell. After the energy has dissipated, these circuits restart more harmoniously. The rest of the body receives this

energy from the brain via the nerves. By activating the waste-disposal system's cells, this extra energy cleanses and purifies before moving on to the body's organs. As a result, the efficiency of the body directly increases.

When we perform *Kunjal Kriya*, the vagus nerve is stimulated in both its sensory and motor functions by the action of the energy flush moving from the stomach on a physical level and *Manipura* chakra on a mental level. The vagus nerve supplies both motor and sensory functions to the heart, lungs, bronchi, trachea, throat, and digestive tract. Its parasympathetic fibres feed directly into the brain's neurons. The entire autonomic nervous system is under the hypothalamus' control. The gag reflex and vomiting are caused by the vagus. While both sympathetic and parasympathetic systems are affected by the additional energy from *Kunjal Kriya*, the sympathetic system predominates since the mind is preparing for vomiting, a stressful condition. The following outcome happens Lungs: bronchial dilatation ends acute asthma; digestive system: decreased peristalsis and increased blood glucose from the liver. Salivary glands begin to secrete, which causes them to be cleaned and washed out. In order to provide more oxygen to the heart muscle, the heart beats more quickly and the blood vessels widen. The diaphragm and abdomen's motion exercises the lungs, which aids in breathing and *Pranayama*. These regions are used to promote mucus production from the mouth, sinuses, and lower respiratory system. The brain experiences a brief blood surge that boosts oxygenation and performance.

Pranic Effects

Stomach and assimilation are administered by '*Manipur Chakra*', the clairvoyant community, wherein prana is put away. The power has been called bio plasma by the researchers exploring Kirlian photography and para-brain science and is a demonstrated and reported substance. When the *Prana* streams, the brain becomes empowered and we feel alive and more joyful. *Kunjal Kriya* assists with freeing the *Prana* and energies of the body and brain.

Psychological Effects

On a mental level, *Kunjal Kriya* can aid in treating a variety of mental illnesses and issues by functioning as a form of shock therapy to refresh the mind and body. In particular, it alleviates phobias, anxiety neuroses, lethargy, and other mood disorders.

CONCLUSION

The mucus linings of both the lungs and trachea could get clogged with toxic wastes from smoking, mouth breathing, and poor diet, which can prevent them from functioning properly. So, it is concluded that if bronchial asthmatic patients follow the *Kunjal Kriya* as *Yogic Kriya* along with the *Yogic*

diet, the episodes of asthma and its severity may be decreased. It will help in improving the quality-of-life asthmatic patients. It also affects individuals' *Pranic* and mental levels to live life healthy with positive energy.

ACKNOWLEDGEMENT

My special thanks to Prof.(Dr.) Medha Kulkarni, HOD Department of Swasthavritta, AIIA, New Delhi-76 for her great co-operation, immense help and encouragement.

REFERENCES:

1. Singh MS, Sundeep, Singh V. Prevalence, time trends, and treatment practices of asthma in India: Global Asthma Network study. ERJ Open Res 2022. (<https://doi.org/10.1183/23120541.00528-2021>)
2. Chowdhury K, Datta N, Rao MV. "Management Of Sthauya (Obesity) Through Kunjal Kriya". International Journal of Research in Ayurveda and Pharmacy, Aug 2013; 4(4): p. 599-604
3. Gautam C. Hathyoga Pradipika Dwitiya Updesh. Bareilly; Sanskriti Sansthan;1982.
4. Dev RR. Sabdakalpadruma Vol. II. Nag Publishers; 1988. p.135
5. Amarsimha with Commentary of Bhanuji Diksita. Amarkosh Dwitiya Kandam, Varga 8. Slok-34. Edited with Notes by M.M. Pandit Shivadatta Dadhimtha.
6. Apte S. Sanskrit Hindi Kosh. Motilal Banarasi Das;1973. p.281
7. Apte S. Sanskrit Hindi Kosh. Motilal Banarasi Das; 1973. p.109
8. Shrivastava M. Jnan Shabdakosh. Banaras Jnanmandal Limited;1973. p.161
9. Brahmachari D. Yogic Sukshma Vyayam. Dheerendra Yoga Publishers;1980.
10. Saraswati SN. Gherand Samhita. Munger; Yoga Publications Trust; 2012. p.91
11. Saraswati SN. Gherand Samhita. Munger; Yoga Publications Trust; 2012. p.91
12. Saraswati SN. Gherand Samhita. Munger; Yoga Publications Trust; 2012. p.92
13. Saraswati SN. Gherand Samhita. Munger; Yoga Publications Trust; 2012. p.92
14. Saraswati SN. Gherand Samhita. Munger; Yoga Publications Trust; 2012, p.92
15. Chowdhury K, Chundawat NS. "Study on the effect of Rohitaka Sharapunkha Churna and Kunjal Kriya on Mukhadusika". Journal of AYUSH: Ayurveda, Yoga, Unani, Siddha and Homeopathy. Jan 2014; 3(1): p. 48-57
16. Singh V. "Kunjal: A Nonspecific Protective Factor in Management of Bronchial Asthma". Journal of Asthma. 1987; 24 (3): p.183-186.

17. Ragavendrasamy B, Nanjundaiah RM, Manjunath NK. Voluntarily Induced Vomiting-A Yoga Technique to Enhance Pulmonary Functions in Healthy Humans. Journal of Ayurveda and Integrative Medicine. Jul-Sep 2017; 9(3): p. 213-216.
18. Hakked CS, Ragavendrasamy B, Manjunath NK. "Yogic breathing practices improve lung functions of competitive young swimmers". Journal of Ayurveda and Integrative Medicine. Apr-June 2017; 8(2): p. 99-104
19. Sharma N., Kumar H. Effect of Kunjal Kriya and Agastya Rasayan in Tamaka Shwasa w.s.r. Bronchial Asthma- a case study. International Ayurvedic Medical Journal, 2021. p.3169-3173
20. Mahindra A, Gussain BS. "Yogic Effect of Respiratory Disorder". International Journal of Advanced Research in Science, Communication and Technology, June 2022;2(5); p. 554- 557

Cite this article as:

Shilpa Shankarrao Walkikar, Shivakumar Harti. The Role of Kunjal Kriya in Upper Respiratory Tract Disorders w.s.r. to Bronchial Asthma. International Journal of Ayurveda and Pharma Research. 2023;11(2):87-92.

<https://doi.org/10.47070/ijapr.v11i2.2686>

Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**

Dr. Shilpa Shankarrao Walkikar

Assistant Professor,
Dept. of Swasthavritta,
A & U Tibbia College & Hospital,
Karolbagh, New Delhi.

Email:

drshilpawalkikar@gmail.com

Contact: 8788692572

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.

