

Effect of Nadishodana Pranayama Practice on Selected Physiological Variables of Sports Persons

Shreenivas Harikanth^{1*}, Raveendra Nalakara²

¹Associate Professor, Department of Physical Education, S.S. College of Physical Education in Mandya, Mysore University, Karnataka, India

²Physical Education Director, M.E.S. College of Arts, Commerce and Science, Bangalore, India

Abstract: Objectives: To study the effect of Nadishodhana pranayama practice on selected physiological variables of sports person. **Subjects:** 20 male, healthy different sports person's volunteers in the age group of 17 to 19 years athletes selected this study. Subjects were divided randomly into two groups of 20 individuals act as subjects and control. **Interventions:** Nadishodhana Pranayama training will be conducted 45 minutes daily for 6 weeks. **Outcome Measures:** Cardiovascular efficiency will be tested by using parameters like 1. Systolic blood pressure 2. Diastolic blood pressure and 3. Heart rate. **Results:** Nadishodhana Pranayama training for six weeks resulted in significant different to post and pre test of physiological variables. **Conclusion:** Our study shows that Nadishodhana pranayama training improves ventricular performance by increasing parasympathetic activity.

Keywords: Nadishodhana pranayama, physiological variables.

1. Introduction

Yoga includes the practice of pranayama, also known as breath regulation. pranayama is one of the part of yoga. Some yoga center begins with a focus on breath and will typically include cues throughout to help students deepen their breath. So many recent studies found that yoga increases the vital capacity of the lungs, which is the amount of air a person can take into their lungs on their inhale breath. Three Months regular practice of yoga reduces cardiovascular hyper activity such as Basil blood pressure rise in blood pressure after one minute of cold stress heart rate and rate of respiration (Varma 2014). Twenty minutes Nadi Shodhana pranayama practice effect on heart rate systolic and diastolic blood pressure peak expiratory flow rate and simple problem solving ability Nadi Shodhana practice quickly alert cardiovascular function and decrease diseases (Subbalakshmi N.K and Disosh 2015) One month pranayama training improves ventricular performance by increasing parasympathetic activity such as systolic blood pressure left ventricular ejection time total mechanical system ejection period (Deor 2012). Nadi Shodhana pranayama immediately effect on cold reduces the blood glucose level heart rate and blood pressure by activity the parasympathetic nervous system (Tripathy and Shavu 2019). Four months Nadi Shodhana practice base line of heart rate and blood pressure show the tendency of decrease and both this autonomic parameter were significantly decrease at breathing point after parametric

breathing (Bhargav H.R 1988). Nadi Shodhana pranayama practice is lowering the pulse rate blood pressure and improve peak respiratory flow rate (Shivagami Guptha R 2017). Nadi Shodhana pranayama training program improve vital capacity control heart rate and blood pressure (Sing 2011). 12week pranayama practice effect on parametric and sympathetic functions (Ragatham 2006). Pranayama is a belly breathing exercise. Try pranayama practicing a few minutes every day, alone or as part of your mat-based asana routine. When you return to your sport of choice, begin to notice how your breathing has changed.

2. Material and Method

Present study the "effect of Nadishodhana pranayama practice on selected physiological variables of sports persons".

A. Selection Subject

20 different sports person from JS athletic sports club Bangalore age range between 17 to 19 Subjects were divided into two equal groups one group under underwent Nadi Shodhana pranayama as experimental second one divided practice any kind of yoga practice control.

B. Selection Variables

Based on the consideration of feasibility criteria and availability the heart rate is taller contest literature was select has criteria and variability sim signal which was used for measuring the heart rate and systole diastole blood pressure of the subject the unit of measurement mm HG pranayama practice as experimental variables for this study.

C. Training Program

The scientifically design Nadi Shodhana pranayama program was given the subject of experimental group duration of training for 6 days per week was 80 days for the subject there went respect to training underwent strictly supervision through out of the study.

D. Statistical Procedure

The following statistical used to find the impulse of the 80 days pranayama practice effect on physiological variables to test significant for the different between pre and post the period t test was used.

*Corresponding author: h.srinivas052@gmail.com

3. Result

Paired t-test was employed to analyze the result as the same subjects were tested before and after the *Nadi Shodhana Pranayama*.

Table 1, result show that there is significance difference between pre test and post test of Nadishodhana pranayam exercise. Nadishodhana pranayam training effect on heart rate. we have mentioned data of Nadishodhana pranayam training pre test heart rate, mean was 80.30 (± 9.12), after the six week Nadishodhana pranayam training post test mean was 78.50 (± 9.03). The information related to pre test and post test Nadishodhana pranayam training effect on heart rate graphically depicted in figure 1.

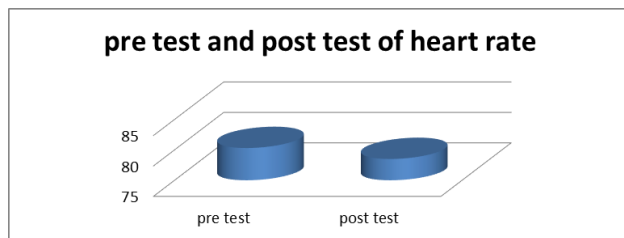


Fig. 1. Pre test and post test of heart rate

Table 2, result show that there is significance difference between pre test and post test of Nadishodhana pranayama practice effect on systolic blood pressure. Nadishodhana pranayama training higher effect on systolic blood pressure. We have mentioned data Nadishodhana pranayama training pre test mean was 111.70 (± 14.75), after the six week Nadishodhana pranayama training post test, mean was 109.90 (± 14.89). The information related to Nadishodhana pranayama training effect on systolic blood pressure graphically depicted in figure 2.

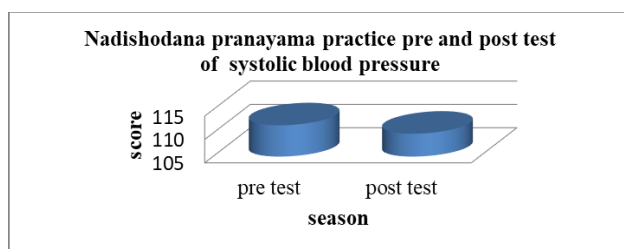


Fig. 2. Nadishodhana pranayama practice pre and post test of systolic blood pressure

Table 3, result show that there is significance difference between pre test and post test of Nadishodhana pranayama practice effect on Diastolic blood pressure. Nadishodhana training higher effect on Diastolic blood pressure. we have mentioned data Nadishodhana pranayama training pre test mean was 67.60 (± 7.47), after the six week Nadishodhana pranayama training post test mean was 65.70 (± 8.50). The information related to Nadishodhana pranayama training effect on Diastolic blood pressure graphically depicted in figure 3.

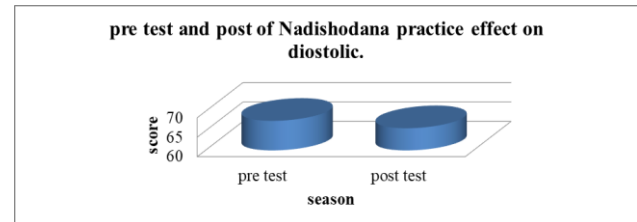


Fig. 3. pre test and post of Nadishodhana practice effect on diastolic

4. Discussion and Finding

Nadi Shodhana Pranayama reduce blood glucose level, heart rate and blood pressure by activating the parasympathetic nervous system which enhances the healthy cardiovascular functioning of the body control high blood glucose by stimulating the insulin secretion from pancreas. Nadishodhana prayam practice is significant difference was shown in blood glucose level from heart rate was significantly decreased. Significant difference was found in systolic blood pressure during Nadi Shodhana Pranayama where diastolic blood pressure was significantly decreased after Nadi Shodhana Pranayama. (Tripathy and Sahu 2019). Nadisudhi pranayama practice effect to lowering the Pulse rate, Blood pressure & improve the Peak expiratory flow rate (Sivagami and Bhutkar 2017), this study includes effective non pharmacological intervention in clinical conditions like bronchial asthma, early bronchitis and hypertension. Nadi-shodhana Pranayama training programme effect on vital capacity and control heart rate and blood pressure (Singh et.all 2011) 6-week nadi-shodhana pranayama training improve the cardiopulmonary parameters.nadishodhana pranayama practice is effect on body temperature, sympathetic activity and an increase in vagal tone (arun kumar 2016).

Table 1

Nadishodhana pranayama pre and post of heart rate						
	Mean	N	Std. Deviation	Std. Error Mean	T	Sig. (2 Tailed)
Pre test of heart rate	80.30	10	9.12	2.88309		
Post test of heart rate	78.50	10	9.03	2.85677	-2.377	.041

Table 2

Nadishodhana pranayama practice pre and post of systolic blood pressure						
	Mean	N	Std. Deviation	Std. Error Mean	T	Sig. (2-Tailed)
Pre Test Systolic Blood Pressure	111.70	10	14.75	4.66440		
Post Test Systolic Blood Pressure	109.90	10	14.89	4.70803	-9.000	.000

Table 3

Nadishodhana pranayama practice pre and post of diastolic blood pressure						
	Mean	N	Std. Deviation	Std. Error Mean	T	Sig. (2-Tailed)
Pre test of diastolic blood pressure	67.60	10	7.47	2.36267		
Post test of diastolic blood pressure	65.70	10	8.50	2.68763	-2.690	.025

5. Conclusion

The study concludes that Nadi- shodhana pranayama practice effect on after the six week decrease the heart, systolic and diastolic blood pressure compare the pre and post test. Nadishodhana pranayam is effect on physiological function.

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