

## Exploring the Influence of Dirga Pranayama on Triglyceride Reduction in Middle-Aged Women

 **Dr. P. Yoga<sup>1\*</sup>**

<sup>1</sup>Assistant Professor, Alagappa University College of Physical Education, Alagappa University, Karaikudi, Tamilnadu, India.

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\*Corresponding Author: [yogap@alagappauniversity.ac.in](mailto:yogap@alagappauniversity.ac.in)

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### Abstract

The purpose of the present study was to investigate the effect of Dirga Pranayama on triglyceride levels among middle-aged women. To achieve the aim of the study, thirty middle-aged women were selected from Bangalore, Karnataka, India, during the year 2025. The subjects' ages ranged from 35 to 45 years. The selected participants were divided into two equal groups, each consisting of 15 women: an experimental group and a control group. The experimental group underwent a six-week Dirga Pranayama program, while the control group did not participate in any special training throughout the study. Triglyceride levels were chosen as the criterion variable for this study. Triglyceride levels were measured using a triglyceride analyzer method (blood test in a lab). A pre-test was conducted before the training period, and a post-test was administered immediately after the six-week training period. The statistical technique used to analyze the means of the pre-test and post-test data for both the experimental and control groups was the 't' ratio. The results revealed a significant difference in triglyceride levels between the experimental and control groups. This difference was attributed to the Dirga Pranayama practices implemented in the experimental group when compared to the control group.

**Keywords:** *Dirga Pranayama, Practices, Triglycerides and "T" Ratio.*



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## 1. INTRODUCTION

Yoga is fundamentally a spiritual discipline rooted in a subtle science, focusing on creating harmony between the mind and body. It is both an art and a science of healthy living. In today's world, sports have become deeply embedded in our culture and have a significant influence on

social institutions such as education, economics, politics, law, mass communication, and even international diplomacy (Alaguraja, K. et.al, 2019). Yoga benefits people of all ages, promoting both physical and mental well-being. The study of Yoga is particularly fascinating to those with a philosophical mind, as it involves silencing the

activities of the mind, leading to a complete realization of the intrinsic nature of the Supreme Being (Alaguraja, K. et.al., 2017). In the realm of sports, physical education plays a crucial role in enhancing performance and effectiveness (Alaguraja, K. et.al., 2018).

Yoga is a system of exercises that helps both the mind and body achieve tranquility and spiritual insight (Alaguraja, K. et.al., 2019). It's important to note that when practicing yoga asanas, one should not simply stretch the body but ensure that the mind is engaged as well (Alaguraja, K. et.al., 2019). Yoga practice can begin at any time, either with meditation or pranayama, without the necessity of performing asanas (Alaguraja, K. et.al., 2019). In today's society, there is an increasing emphasis on appearing smarter, feeling better, and living longer. Scientific evidence suggests that high levels of fitness and regular exercise are key to achieving these ideals (Alaguraja, K. et.al., 2019). Yoga, as a holistic practice, assists individuals in attaining a state of heightened awareness and consciousness. This leads to greater receptivity and critical thinking, which can be a powerful tool for improving one's mental and physical health (Yoga, P. et.al., 2019).

Yoga is not a religion but a practical tool that can be practiced by individuals from all walks of life whether Buddhist, Jew, Christian, Muslim, Hindu, or Atheist. Yoga, in essence, is a union for all (Selvakumar, K. et.al., 2019). The origins of Yoga are believed to date back to the very dawn of human civilization. Ancient sages shared this profound yogic science across various parts of the world, passing down knowledge that continues to benefit humanity.

## 2. RESEARCH METHODOLOGY

### 2.1. Selection of subjects

The purpose of the study was to find out the effect of dirga pranayama practices on triglycerides among middle aged women. To achieve this purpose of the study, thirty middle aged women were selected as subjects at random. The age of the subjects were ranged from 35 to 45 years.

### 2.2. Selection of variable

- **Independent variable:** Dirga Pranayama Practices
- **Dependent variable:** Triglycerides

## 3. EXPERIMENTAL DESIGN AND IMPLEMENTATION

The selected subjects were divided into two equal groups, each consisting of 15 subjects: the Dirga Pranayama Practices Group (Experimental Group) and the Control Group. The experimental group underwent Dirga Pranayama practices for six days per week for a period of six weeks. The control group, however, did not participate in any special training program and continued with their regular physical activities as per their curriculum.

The biochemical variable selected for this study was Triglycerides, and it served as the criterion variable. All subjects in both groups were tested on triglyceride levels using a triglyceride analyzer method (blood test conducted in a laboratory) both prior to the training program (pre-test) and immediately after the six-week training period (post-test).

Statistical analysis was carried out using the t-test to compare the mean differences between the pre-test and post-test results of both the experimental and control groups. This was done to determine if there was a significant effect of Dirga Pranayama practices on triglyceride levels among the participants.

### 3.1. Statistical technique

The 't' test was used to analysis the significant differences, if any, difference between the groups respectively.

### 3.2. Level of significance

The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

## 4. ANALYSIS OF THE DATA

The significance of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent 't' test was used with 0.05 levels as confidence.

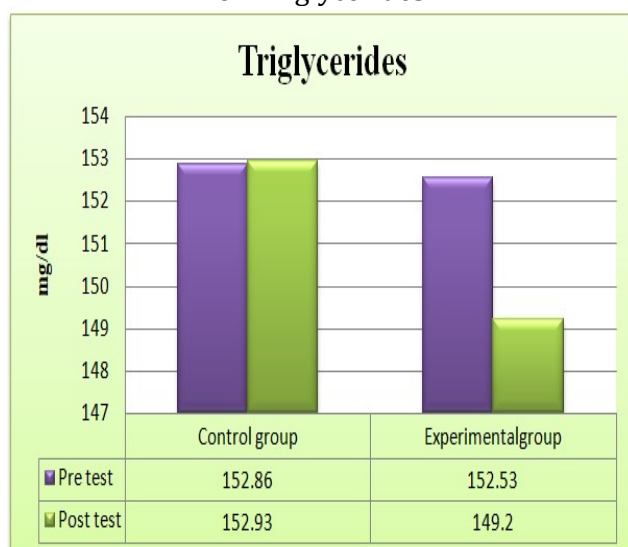
**Table-I:** Analysis of t-ratio for the pre and post-tests of the experimental and control group on Triglycerides (Scorecounts in number)

Variables	Group	Mean		SD		df	't' ratio
		Pre	Post	Pre	Post		
Triglycerides	Control	152.86	152.93	3.41	3.43	14	0.25
	Experimental	152.53	149.20	3.29	2.80		11.60*

\*Significance at .05 level of confidence.

Table-I presents the mean values of the pre-test and post-test for triglycerides in both groups. In the control group, the mean values were 152.86 before the intervention and 152.93 after, with an obtained 't' ratio of 0.25. Since this value is lower than the required table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom, the difference was found to be statistically insignificant.

In contrast, the experimental group showed a pre-test mean of 152.53 and a post-test mean of 149.20. The obtained 't' ratio for this group was 11.60, which is greater than the required table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom, indicating a statistically significant difference. The results of the study indicate a significant difference between the control and experimental groups in triglyceride levels. It can be concluded that the experimental group experienced a significant improvement in triglyceride levels due to six weeks of Dirga Pranayama practices.

**Figure-1:** Bar Diagram Showing the Pre and Post Mean Values of Experimental and Control Group on Triglycerides

## 5. DISCUSSIONS ON FINDINGS

The results of the study indicate that the experimental group, which practiced Dirga Pranayama, showed a significant improvement in the selected dependent variable, Triglycerides, compared to the control group. This improvement was found to be directly attributed to the Dirga Pranayama practices, as the control group did not show similar changes.

## 6. CONCLUSION

On the basis of the results obtained the following conclusions are drawn,

- There was a significant difference between the experimental and control groups in Triglycerides after the training period.
- There was a significant improvement in Triglycerides, with the improvement favoring the experimental group due to six weeks of Dirga Pranayama practices.

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