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**Mahesh Kumar**

C.R.M. Jat College, Hisar,  
Haryana, India

## Effects of yoga and pranayama on lipid profile and sugar level of senior citizen

**Mahesh Kumar**

### Abstract

A study was conducted with an objective to assess the effect of Yoga and Pranayama on lipid profiles and sugar level of Senior Citizen. The study concluded that three month training of Yoga therapy had positive significant effect on the total cholesterol, low density lipoprotein (LDL), high density lipoprotein (HDL) and sugar level of Senior Citizen. The Yogic exercise and Pranayam reduces the level of total cholesterol, LDL and sugar in the blood and also enhanced the level of HDL in blood.

**Keywords:** lipid profile, total cholesterol, low density lipoprotein (LDL), high density lip protein (HDL) and sugar level.

### Introduction

Rising costs of prescribed drugs and increasing population are making alternative medicine look increasingly more attractive. Yet there are few rigorous, scientific studies examining the safety and effectiveness of alternative and complementary therapies in fighting specific symptoms or diseases. Yoga is a promising and most appealing therapy in the recent times. It is increasingly gaining popularity as a means of exercise and fitness training. A 2003 survey commissioned by Yoga Journal found that 16.5 million Americans are exercising Yoga (Harris Interactive Service Bureau Survey). It is observed that the Indian philosophy of living (i.e. Yoga life) has gained a great momentum among the people of well developed nations but caution is needed because Yoga has now become a "new fitness craze". However it needs to be recognized more by health care professionals for a complement to conventional medical care rather than just a trendy leisure activity. Over the last 10 year research studies have show that the Yogic exercise had improved strength, flexibility, cardiovascular endurance and many more abilities in our body.

The physiological benefits of participating in Yoga activity have been proven unequivocal. However the psychological benefits of participation in Yoga activity such as decreased depression and anxiety or improved mood are more likely to be experienced when the physical activity such as Yoga is enjoyable and there is a feeling of flow.

Yoga posture improves the body's alignment, resulting in increased circulation, nervous system stimulation and increase energy. Yoga allows participants to wake up and be fully with in and not disconnected from their bodies. Yoga practice encourages clarification and expression of one's awareness and consciousness quieting the voice of the inner critic. The intention of Yoga is to maximize one's potential through the realization of one's inner goodness and inner goodness of others as well. True Yoga embraces the inter connectedness of the spirit and body. The gift of Yoga is the lesson learned from an enjoyable physical activity which invites all the people of different age groups to become stronger, more mindful and more intuitive, enhances our emotional spiritual and mental health.

Galantino (2004) <sup>[7]</sup>, through a pilot program, examined that ability of Yoga for alleviating low back pain, the practice improved balance and flexibility and decreased disability for people with chronic back problems. Narendran (2005) <sup>[8]</sup> suggested that integrated approach to Yoga during the pregnancy is safe. It improves birth weight, decreases pre-term labour and decreases IUGR either in isolation as associated with PIH, with no increased complications. Recent research had proved that Yoga not only improves the physical variables but also tone up the

**Correspondence**

**Mahesh Kumar**

C.R.M. Jat College, Hisar,  
Haryana, India

internal organs of the body.

After the age of 60 it is not possible to do the rigorous exercises. Even our eating habits and quality of food leads to the problem of heart and diabetes in the old age. So in this age Yoga is only the way where the continued movement is allowed for a sufficient heart rate training effect of low to moderate intensity.

Keeping in view the importance of Yoga, the present study was carried out to determine the effects of Yoga asanas and pranayama on lipid profiles and sugar level in the blood of Senior Citizens. Further the study was splitted over these Objectives:

1. To find out whether there was any effect of Yoga therapy on total cholesterol of Senior Citizen.
2. To determine whether there was any effect of Yoga therapy. On low density lipoprotein (LDL) and high density lipoprotein (HDL) in the blood of Senior Citizen.
3. To discover effect of Yoga therapy on sugar level in the blood of Senior Citizen.

## Materials and Methods

The methods of study were splitted over following heads:

### a) Sampling

In the present study a purpose sampling plan was used for selecting the samples. The present investigation was conducted on a total 25 male between the age of 60 to 70 years.

### b) Collection of the data

The selected sample went through training for three months under the direct supervision of Yoga experts and the researchers. The intervention consists of Dhanurasana, Bhujagasana, Chakrasana, Paschimotansana, Shalabhasana, Puran Matsyandrasana, Shavasana asanas and Nadishodhana, Sithali, Sitakari, Brahmari, Bhastrika and Kapalbhathi, Paranyama were performed early in the morning from 5.00 to 6.30 a.m. daily at CCS HAU ground.

These variables (Total cholesterol low density lipoprotein and high density lipoprotein) of lipid profile and sugar level were determined in fasting blood samples, taken on the first and last day of the training.

After getting the reports of both the samples the data was analyzed statistically.

### c) Statistical procedures

Keeping in view the objectives as well as design of the study, the appropriate statistical technique such as t-test, S.D. and mean were used to analyzed the data.

## Result and Discussion

After having a thorough thought the scores of data in Table 1 it was denied that t-ratio (2.65) is significant at 0.01 level. The fasting sugar is indirectly related to the diabetes so the lower mean value of the post-test shows that the Yoga therapy has a significant effect on sugar level of the Senior Citizen. Singh (2004) [6] and Damodaran (2002) [1] had also supported the findings of the present study.

Table 2 shows that the t-ratio (3.31) is significant at 0.01 level. The scores of total cholesterol level is indirectly related to the health of an individual. Therefore the lower mean value of the post-test (170) show that the Yogic exercise and pranayama had a significant effect on the total cholesterol of the Senior Citizen. Yogendra (2004) and Bijlani (2005) [3] in their study also find that with the help of Yoga one can reduce

his total cholesterol in the blood.

Table 3 indicates that the t-ratio (3.40) is significant at 0.01 levels. The scores of HDL is directly related to the health of individual, so the higher mean value (54.52) of the post-test shows that the Yoga therapy had a positive significant effect on HDL of the Senior Citizen. Bijlani (2005) [3] supported the findings of present study.

From Table 4 it was found that the t-ratio (3.99) was significant at 0.01 levels. The scores of LDL is indirectly related to the health of an individual so the lower mean value (119.08) of post-test as compare to mean value (146.48) of pre-test shows that the Yogic exercise and pranayama helps in reducing the level of LDL which is harmful in the body. Studies from Manchanda (2000) [4], Yogendra (2004) [5] and Bijlani (2005) [3] had also supported the present study.

**Table 1:** Mean S.D. and t-ratio of pre-test and post-test on fasting sugar level

	N	Mean (m)	Standard deviation (S.D.)	t-ratio
Pre test	25	146.36	37.01	2.65**
Post-test	25	122.20	26.96	

\*\*significant at 0.01 level

**Table 2:** Mean S.D. and t-ratio of pre-test and post-test on total cholesterol.

	N	Mean (m)	Standard deviation (S.D.)	t-ratio
Pre test	25	199.28	35.69	3.31**
Post-test	25	170.00	25.92	

\*\*significant at 0.01 level

**Table 3:** Mean S.D. and t-ratio of pre-test and post-test on HDL.

	N	Mean (m)	Standard deviation (S.D.)	t-ratio
Pre test	25	49.28	6.03	3.40**
Post-test	25	54.52	4.8	

\*\*significant at 0.01 level

**Table 4:** Mean S.D. and t-ratio of pre-test and post-test on LDL.

	N	Mean (m)	Standard deviation (S.D.)	t-ratio
Pre test	25	146.48	27.94	3.99**
Post-test	25	119.08	19.91	

\*\*significant at 0.01 level.

## Conclusion

Based on the present study it was concluded that Yoga therapy have a positive effect on reducing the level of sugar (glucose), blood cholesterol and LDL and it is also beneficial in enhancing the HDL level in the blood of Senior Citizen. Accepting Yoga as the choice to quit battling the body and the intention to find a path that leads to a fulfilled life, which is happier and healthier for all ages, sex, size, shape and weights.

## References

1. Damodaran A, *et al.* Therapeutic potential of Yoga practices in modifying cardiovascular risk profile in middle aged men and women. J Assoc. Physicians India. 2002; 50:633-40.
2. Malhotra V, *et al.* Study of Yoga asana in assessment of pulmonary function in NIDDM patients. Indian J Physical Pharmacol. 2002; 46(1):313-20.
3. Bijlani RL, *et al.* A brief but comprehensive lifestyle education program based on Yoga reduces risk factors for cardiovascular disease and diabetes mellitus. J Altren Complement Med. 2005; 11(2):267-74.
4. Manchanda SC, *et al.* Retardation of coronary

- atherosclerosis with Yoga lifestyle intervention. The Journal of the Association of Physicians India. 2000; 48:687-94.
5. Yogendra J, *et al.* Beneficial effects of Yoga lifestyle on reversibility of ischaemic heart disease: causing heart project of International Board of Yoga. Journal Assoc. Physicians India. 2004; 52:283-9.
  6. Singh S, *et al.* Role of Yoga in modifying contain cardiovascular functions in type 2 diabetic patients. J Assoc. Physicians. 2004; 52:203-6.
  7. Galantino ML, *et al.* The impact of modified Hath Yoga on chronic low back pain: A pilot study. Alternative therapies in Health and Medicine. 2004; 10(2):56-9.
  8. Narendran S, *et al.* Effect of Yoga on pregnancy outcome. J Altern. Complement Med. 2005; 11(2):237-44.