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# Effect of selected yogic practices on blood sugar and urine sugar levels of diabetic patients

■ **ARJUN SINGH**

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**Author for correspondence**

ARJUN SINGH
Department of Physical Education, Dr. Ram Manohar Lohia Avadh University, Faizabad (U.P.) INDIA
Email: arjunsinghau@gmail.com

■ **ABSTRACT**

For the purpose of the study, forty subjects who were medically certified chronic diabetic patients were selected as subjects. The selected subjects were 40 type -1 diabetics. The subjects were grouped into four categories *viz.*, the control and three experimental groups. After exhaustive deliberation with the experts and several experimental programmes designing three forms of programmes were developed and that were experimented. Successful accomplishment of this study was a result of very exhaustive deliberation, discussion critical reviews of literature frequent and several experimentation and finally compliance of various systematic methodologies in administrating of yogic treatment of programmes. Finding of the study not only provided understanding about the yogic experimental effects but also methodology of conduct of such studies. Based on all above finding from statistical analysis within the constraints and limitations of the study following conclusions were drawn.

■ **KEY WORDS :** Yogic practices, Blood sugar level, Urine sugar level, Diabetic patients

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The efficacy of the exercise in controlling blood sugar as a preventative masseur for diabetic is well established. With growing economic power the working middle class has changed more in these terms. This as a result, health hazards from diabetes has increased multi fold. Diabetes is highly endemic among Indian population and because of dietary habits, life style etc. Indian population is more at risk.

It was a critical observation in this regard that efficacy of every form of exercise that is available were quite not experimented. Yogic exercises are easier to perform; it does not involve any vigorous and complicated movement. It is based on stretching, specific pressure stimulations and creation of specific breathing techniques, adopting specific physical posture. In addition to this inorganic functional improvement, efficiency of various asana are tested and found factually proved and this provided a hope for diabetic patients. Further this enhances the function of pancreas and the secretion of insulin by beta cell. It could be revived through yogic exercises improved efficiency of insulin utilization and transportation of blood glucose. In such cases the benefit will be ultimately derived by type-1.

With this understanding researcher has conceptualized this study to experiment with three variations of comprehensive yogic exercise programmes for controlling or lowering of glucose level of type- I diabetic patients.

## ■ METHODOLOGY

For the purpose of the study, forty subjects who were medically certified chronic diabetic patients were selected as subjects. The selected subjects were 40 type -1 diabetics. The subjects were grouped into four categories *viz.*, the control and three experimental groups.

After exhaustive deliberation with the experts and several experimental programmes designing three forms of programmes were developed and that were experimented. The first group performed yogic asana, second pranayama, the third group performed combination of asana and pranayama. Approximately the program was of the duration of one hour. Which were administrated and experimented six days a week for twelve weeks glucose levels were tested on blood as well as urine? God- Pod method was used for blood glucose testing and benedict method was used for urine testing.

Research scholar himself personally administrated the three forms of yogic exercise programme initially for six weeks then managed with one trained assistant during the latter part of the programme. When programme was managed by trained assistant the research scholar did constantly supervise the training session data on blood sugar and urine sugar were collected as pre- test prior to Beginning of programme and as post- test after six weeks and at the end twelve weeks. Analysis of co-variance was used exclusively to compare the effect of three yogic experimental treatments programme for type -1 diabetic patients.

## ■ OBSERVATIONS AND DISCUSSION

Findings show significant effect of all three experimental groups in type-1 diabetes. The significant effect as lowering of sugar was found both in blood test and urine test. The significance of the entire three programmes was observed on both six weeks testing as well as twelve weeks testing. At end of twelve weeks the equated mean blood sugar value for type -1 diabetes was found to be 214.91mg, 217.8mg, 211.31mg and 235.01 mg, respectively for the asana group, pranayama group and combination of asana, pranayama and control group.

The experimental groups were further found significant on lowered blood sugar level with a mean difference value, when compared to control group as 20.1mg, 17.21mg and 22.07mg for asana group, pranayama and combined group, respectively.

Mean comparison of blood sugar level for diabetic type- 1 patients of three experimental groups and control group after twelve weeks of.

**Experimental treatment:**

It is clearly evident findings that the adjusted post-test means differences in between the entire group were higher than the critical difference 0.37. Except asana group and combination of asana and pranayama group's mean differences was lesser than the critical difference 0.37 required being significant at 0.05 levels.

The findings implies over whelm that combination of asana and pranayama had decreased blood sugar level for diabetic type-1 patients more than asana and followed by pranayama after six weeks of practice. The graphical representation of mean comparison of blood sugar for diabetic type-1 patient of three experimental groups and control groups after six weeks of experimental treatment is presented in Fig. 1.

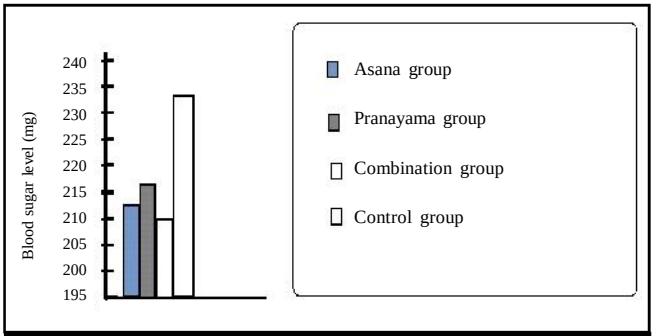


**Fig. 1 : Mean comparison of blood sugar for diabetic type-1 patient**

Mean comparison of urine sugar level for diabetic type- 1 patients of three experimental groups and control group after twelve weeks of.

**Experimental treatment :**

Fig. 2 depicts that the adjusted post test mean difference between the entire group were higher than the critical difference 5.59. Except asana group and combination of asana and pranayama group mean differences was lesser than the critical difference 5.59 required being significant at 0.05 levels.

The findings implies overwhelm that combination of asana and pranayama had decreased blood sugar level

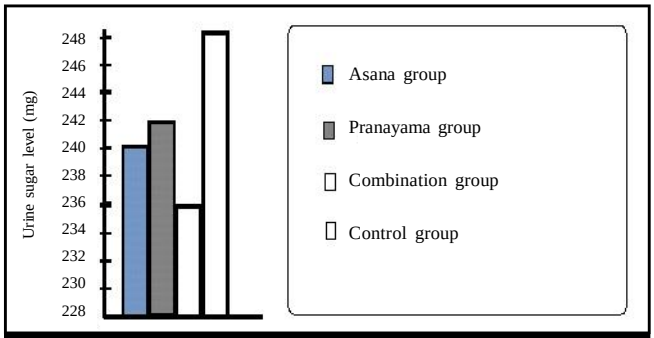


**Fig. 2 : Post test mean difference between the entire group**

for diabetic type- 1 patients more than asana and followed by pranayama after twelve weeks of practice.

**Conclusion:**

Successful accomplishment of this study was a result of very exhaustive deliberation, discussion critical reviews of literature frequent and several experimentation and finally compliance of various systematic methodologies in administrating of yogic treatment of programmes. Finding of the study not only provided understanding about the yogic experimental effects but also methodology of conduct of such studies. Based on all above finding from statistical analysis within the constraints and limitations of the study following conclusions were drawn.

Yogic asana and pranayama based comprehensive exercise programme can significantly reduce the blood sugar level among type -1 diabetic patients.

Yogic asana and pranayama based comprehensive exercise programme is also effective in lowering urine sugar level type - 1 diabetic patients.

Yogic therapeutic programme are more comprehensive and suitable for any age group diabetic patients.

Unlike other exercise programme yogic exercise emplace on functional improvement of organ and efficiency of various functioning systems of the body.

Yogic therapeutic programme for diabetic patients is highly effective from the point of direct functional improvement revival of pancreatic actions insulin functional efficiency etc.

While programming yogic exercise based programme for diabetic patients it is most necessary to understand and incorporate yogic asana and pranayama which essentially involve movements stretching, pressure, stimulation etc. effectively on abdominal organs area.

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