

# THE EFFECT OF BREATHING TECHNIQUE TRAINING ON CARDIAC FUNCTION IN PATIENTS WITH HEART FAILURE

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## INTRODUCTION

Heart failure (HF) is an epidemic contributing considerably to the overall cost of health care in developed and developing countries. HF is characterized by a steady decrease in cardiac pump function which is eventually lethal. Mechanisms by which yoga may improve cardiac function and reduce myocardial stress are speculated at this time. Yoga breathing exercises reduce the sympathetic activity and could lead to a decrease in ventricular filling pressures, but its potential benefit for HF patients is unclear.

## AIM OF STUDY

To evaluate whether full yogic breathing in addition to standard medical therapy can improve cardiac function in patients with HF.

## MATERIALS AND METHODS

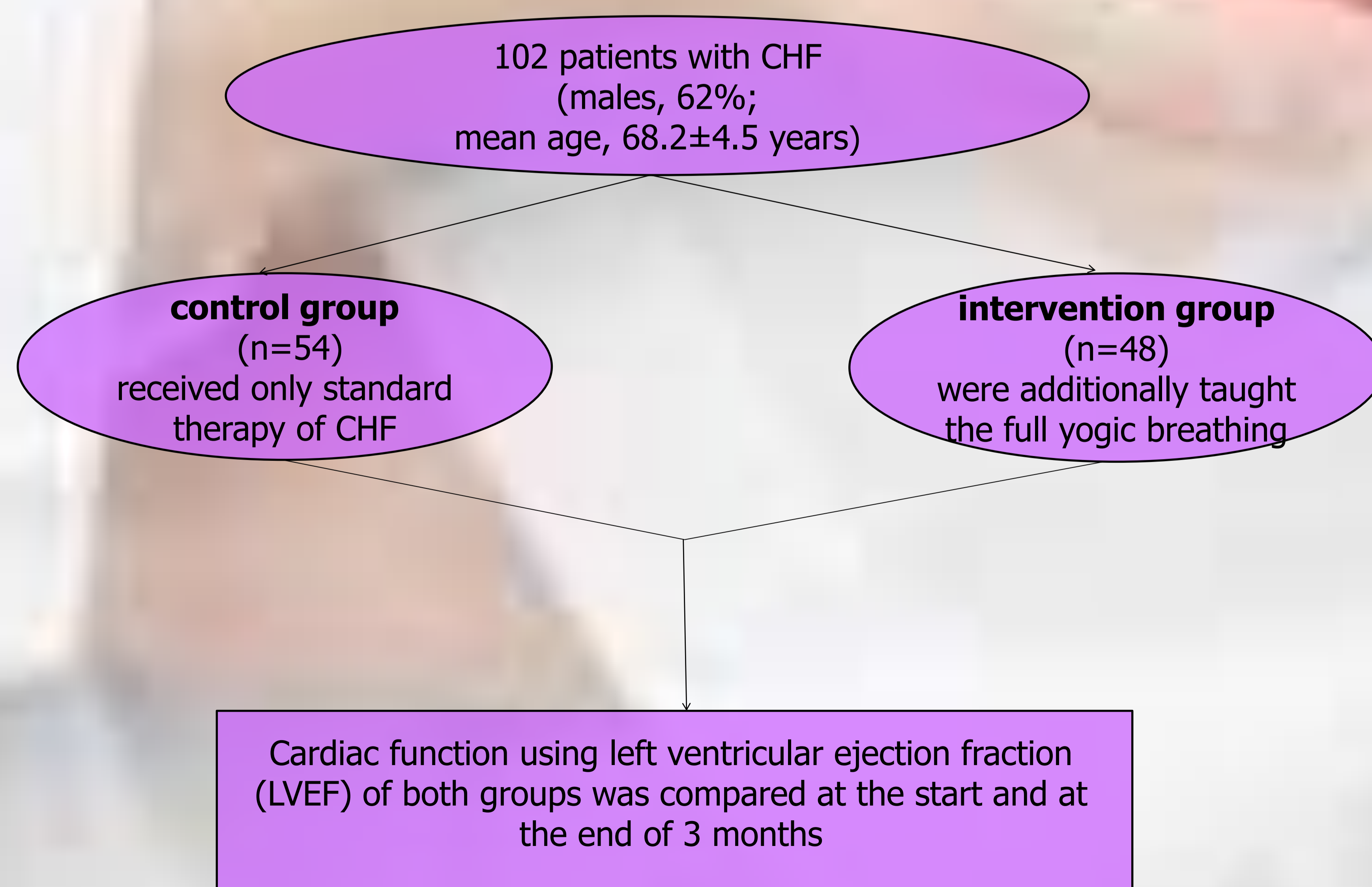
### Inclusion criteria

- patients of the age up to 18 with stable ischemic heart disease in anamnesis and decompensation of CHF with symptoms leading to hospitalization
- CHF was diagnosed with the presence of chronic HF history and at least one symptom (dyspnea, orthopnea, or edema) and one sign (moist rales, peripheral edema, ascites, or pulmonary vascular congestion on chest radiography).

### Exclusion criteria

- gastroesophageal reflux disease
- diaphragmatic hernia
- cancer
- pregnancy
- cardiac surgery within 90 days of enrollment
- comorbid conditions with an expected survival of less than 6 months
- acute myocardial infarction at time of hospitalization
- retinal detachment
- increased intracranial and intraocular pressure

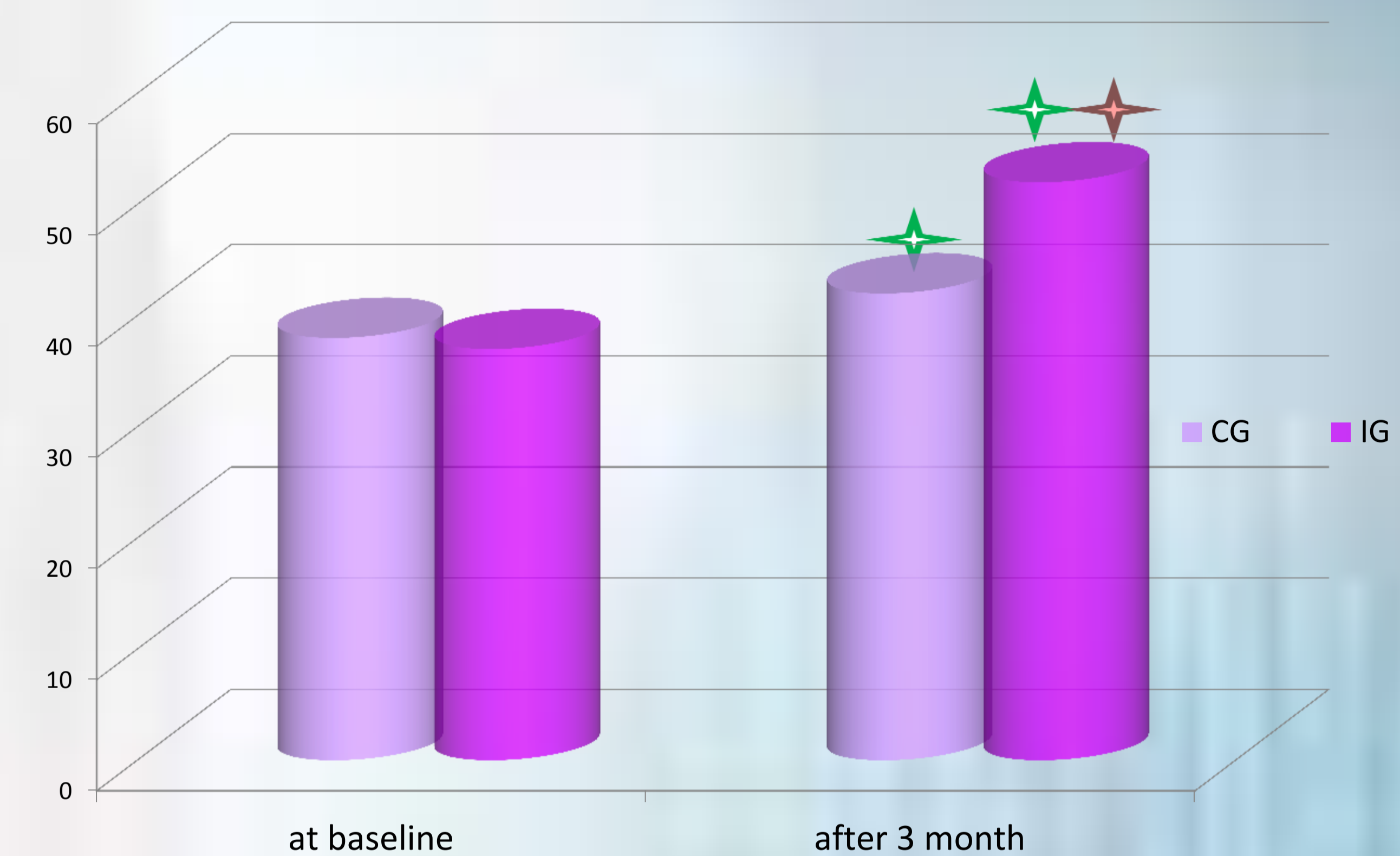
### STUDY DESIGN



## RESULTS

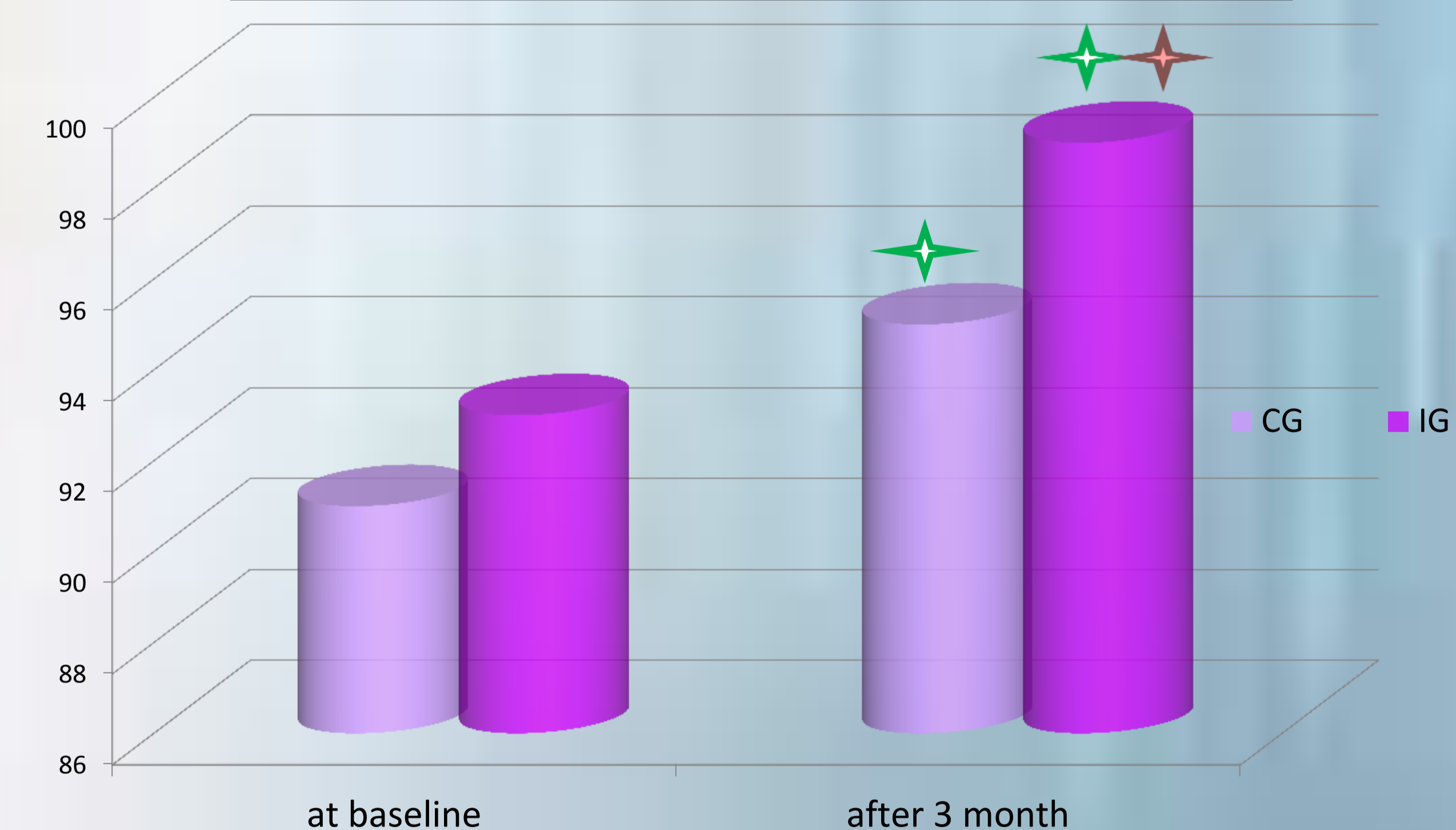
There was no significant difference in baseline characteristics of the participants

### MEASUREMENT OF LEFT VENTRICULAR EJECTION FRACTION



- ◆ Statistically significant difference in parameters at baseline and after 3 month ( $p < 0.05$ )
- ◆ Statistically significant difference between CG and IG ( $p < 0.05$ )

### MEASUREMENT OF STROKE VOLUME



- ◆ Statistically significant difference in parameters at baseline and after 3 month ( $p < 0.05$ )
- ◆ Statistically significant difference between CG and IG ( $p < 0.05$ )

## CONCLUSIONS

Yoga breathing practice for 3 months showed a significant improvement in systolic function of left ventricular.

## DECLARATION OF INTEREST

NO Conflict to declare.